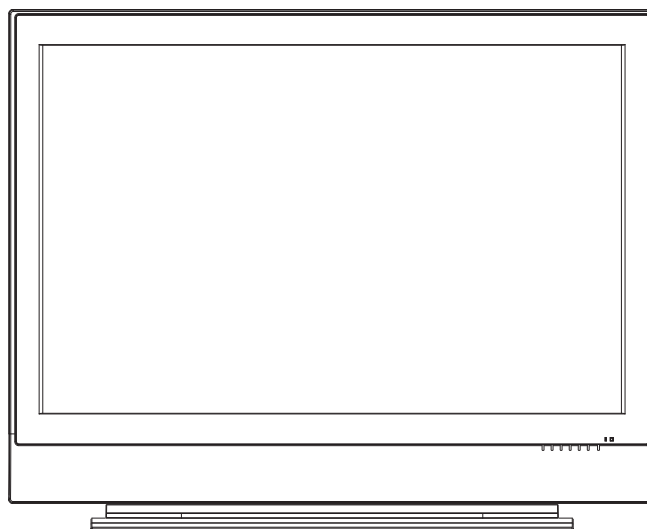


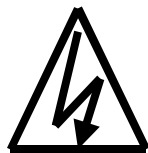
# *Plasma Flat Panel*



42"/50" Plasma TV

Owner's Manual

## Important Safety Instructions



### WARNING

RISK OF ELECTRIC SHOCK  
DO NOT OPEN



**WARNING:** To reduce the risk of electric shock, do not remove the front or back covers.  
No user-serviceable parts inside. Refer servicing to qualified service personnel only.



The lightning flash with arrow-head within a triangle is intended to inform the user that parts inside the product are a risk of electric shock.



The exclamation point within a triangle is intended to tell the user that important operating and servicing instructions are explained.

## Special Notices

- Certain programs may be copyrighted and any unauthorized recording in whole or in part may be in violation of copyright laws in the U.S. and Canada.
- FCC/CSA regulations state that any unauthorized modifications to this display may void user authority to operate it.

## Warnings & Precautions

- To prevent damage which may result in fire or shock hazard, do not expose this product to rain or moisture.
- To prevent electric shock, do not remove cover. No user serviceable parts are inside. Refer servicing to qualified service personnel only.
- Keep display away from excessive dust, high temperature, moisture or direct sunlight.
- Use in a well-ventilated area and do not cover ventilation openings.
- Unauthorized modifications to this equipment or usage of an unshielded connecting cable may cause excessive interference.
- When the display is not in use, disconnect it from the electric outlet.
- If the picture displayed is in any way abnormal, turn off the unit and disconnect it from the electric outlet. Verify your signal wire connections and reconnect the display to the electric outlet.
- Do not place this product on an unstable cart, stand or table. The product may fall, causing serious damage.
- Do not place the unit on a bed, sofa, rug, or other similar surfaces.
- Never place the unit near or over a radiator or heat source.
- Do not install unit in an enclosed area unless proper ventilation is provided.
- The unit should be operated from the type of power source indicated on the label. If the type of available power is unknown, consult your dealer or local power company.
- The unit is equipped with a 3-pin grounded plug. The plug will only fit into a grounded power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact your electrician. Do not alter this plug as this will defeat the safety feature. Power cord not lighter than H05VV-F, 3G, 0.75mm<sup>2</sup> shall be used.
- Do not rest objects on the power cord & avoid placing power cord near high traffic areas.
- Do not overload wall outlets and extension cords as this can result in a risk of fire or electric shock.
- Unplug the display from the electric outlet and disconnect the antenna/cable TV system during a lightning storm or when left unused for long periods of time. This will prevent damage to the display caused by lightning and power-line surges.
- Avoid overhead power lines. An outdoor antenna system should not be placed in the vicinity of overhead power lines, electric lights, or power circuits. When installing an outdoor antenna, be careful to not touch any power lines or circuits as contact with these lines can be fatal.
- Do not insert any foreign objects through the ventilation openings to the display. It may touch dangerous voltage points or damage parts.

# Important Safety Instructions

- If an outdoor antenna or cable system is connected to the display, be sure the antenna or cable system is grounded to provide some protection against voltage surges and static charge buildups. Section 810 of the National Electrical Code, ANSI/NFPA No. 70-1984, provides information about proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna discharge unit, connection to grounding electrodes, and requirements for the grounding electrode.
- If this display is equipped with separate speakers, please remove the speakers prior to moving the display. Moving the display with the speakers attached may cause damage or injury.
- Disconnect the unit from the main supply and refer servicing to qualified service personnel under the following conditions:
  - Power cord or plug is damaged or frayed.
  - Liquid has been spilled into the product and/or the unit has been exposed to water or moisture.
  - Unit does not operate normally when the operating instructions are not followed. Adjust only those controls that are covered by the operating instructions, improper adjustment of other controls may result in damage which often requires extensive work by a qualified technician to restore the unit to normal operation.
  - Unit has been dropped or the cabinet has been damaged.
  - Unit exhibits a distinct change in performance, indicating a need for service.

## Cleaning & Maintenance

- Disconnect from the electric outlet before cleaning. Do not use liquid or aerosol cleaners. Use only a slightly damp cloth for cleaning.

## Special Warranty Information

### Cell Defects

- Although the display panels are produced with more than 99% percent active cells, there may be some cells that do not produce light or remain lit. This is considered normal and not a manufacturer defect.

**Note to CATV System Installer-**This reminder is provided to call the CATV system installer's attention to Section 820-93 of the National Electric Code which provide guidelines for proper grounding and in particular, specify that the Coaxial cable shield shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

# Regulatory Notice

## FCC Statement

The Federal Communications Commission Radio Frequency Interference Statement includes the following warning:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television receptions, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

## Warning

User must use shielded signal interface cables to maintain FCC compliance for the product. Provided with this display is a detachable power supply cord with IEC320 style terminations. It may be suitable for connection to any UL Listed personal computer with similar configuration. Before making the connection, make sure the voltage rating of the computer convenience outlet is the same as the monitor and that the ampere rating of the computer convenience outlet is equal to or exceeds the monitor voltage rating. For 120 Volt applications, use only UL Listed detachable power cord with NEMA configuration 5-15P type (parallel blades) plug cap. For 240 Volt applications use only UL Listed Detachable power supply cord with NEMA configuration 6015P type (tandem blades) plug cap.

## IC Compliance Notice

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations of ICES-003.

Cet appareil Numérique de classe B respecte toutes les exigences du Règlement NMB-03 sur les équipements produisant des interférences au Canada.

## Notice de Conformité IC

Cet appareil numérique de classe B respecte toutes les exigences du Règlement ICES-003 sur les équipements produisant des interférences au Canada.

Manufactured under license from Dolby Laboratories.  
Dolby and the double-D symbol are trademarks of Dolby Laboratories.

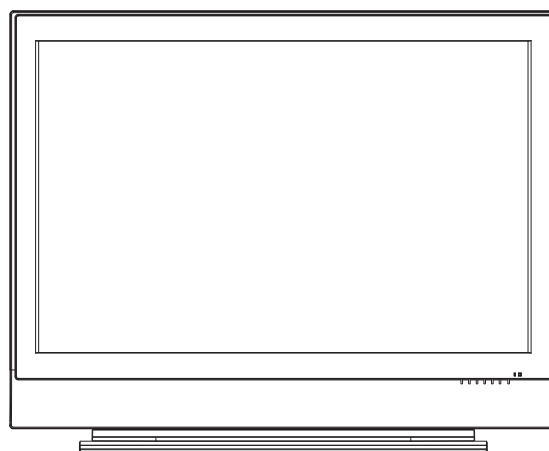
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# Getting to Know Your TV



# Getting to Know Your TV

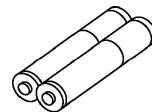
## Package Contents



Flat Panel TV



Remote Control



Batteries



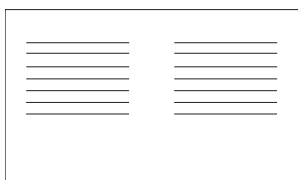
User Manual



Warranty Card



Power Cord

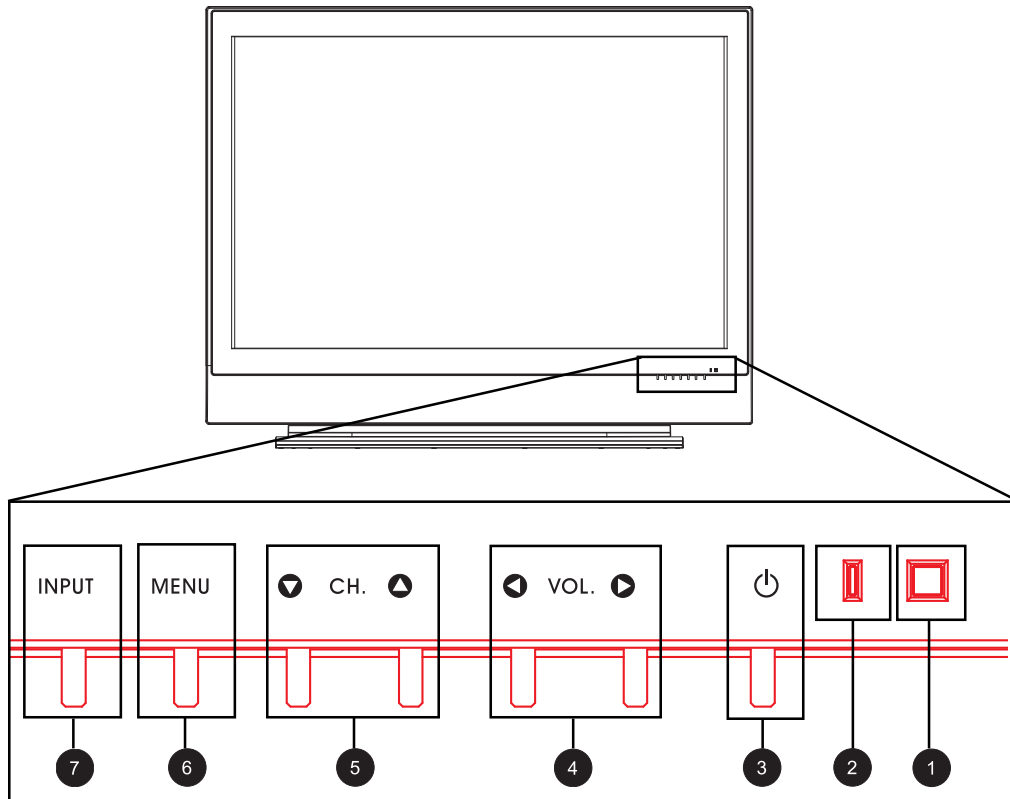


Quick Start Guide



# Getting to Know Your TV

## Front Panel Controls



### 1 Infrared Receiver

Receive IR signal from the remote control.

### 2 Status LED

**Orange - Standby (Power OFF) with AC power detected**

The LED will illuminate in orange color if the TV is shut-off but the main power cord is plugged into the back of the unit.

**Solid Green - Power ON**

Receive IR signal from the remote control.

### 3 Power (Standby) Button

Turns power on or off from standby mode. There is a wait period between on or off cycles.

### 4 Volume Adjustment Buttons

Use these buttons to adjust volume up and down. These keys also serve as navigation and adjustment keys when On Screen Display menu is engaged.

### 5 Channel Select Buttons

Use these buttons to select Channel up or down.

### 6 Menu Button

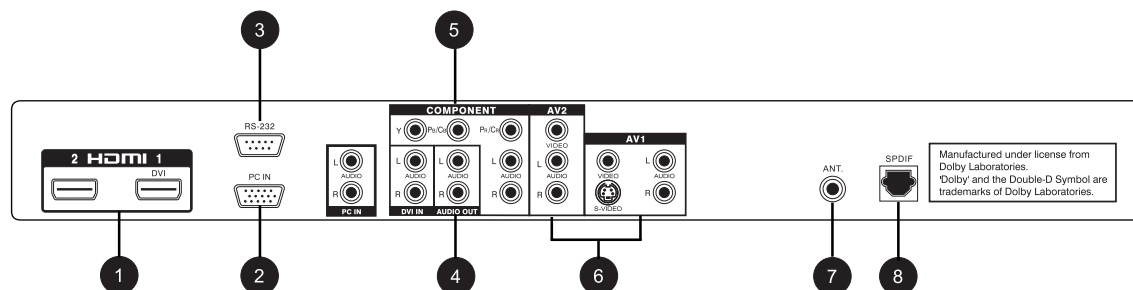
Use this button to engage the On Screen Display menu.

### 7 Input Button

Use this button to switch between available inputs.

# Getting to Know Your TV

## Rear Panel Connections



### 1 Digital HDMI/DVI Inputs

Connects to the digital video signals from a DVD player or Set-Top Box.

### 2 PC Input

Connect to another computer monitor for chaining applications.

### 3 RS-232 Connector

Connect to a computer serial port.

### 4 Audio Output

Variable or fixed audio output jacks for connecting to an external audio amplifier.

### 5 Component Video Inputs

Auto-detecting component video inputs (Y/Pb/Pr or Y/Cb/Cr) for connecting to the component output jacks of a DVD player or Set-Top Box.

### 6 Composite / S-Video Inputs

Connect Composite or S-Video signals from external sources such as VCRs or DVD players.

### 7 Antenna Jack

Connect to an antenna, cable service for standard NTSC service or digital cable for Digital TV.

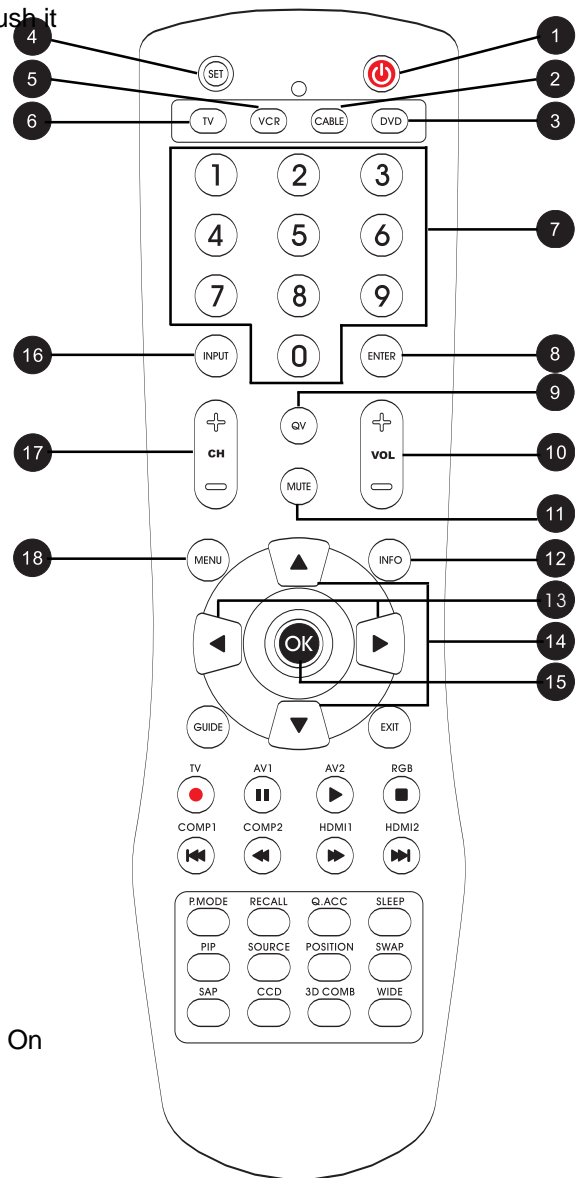
### 8 SPDIF Digital Audio Output

When the Digital TV input is selected for viewing, the digital audio associated with Digital programming will be available on this output for connection to your home theatre system.

# Getting to Know Your TV

## Remote Control

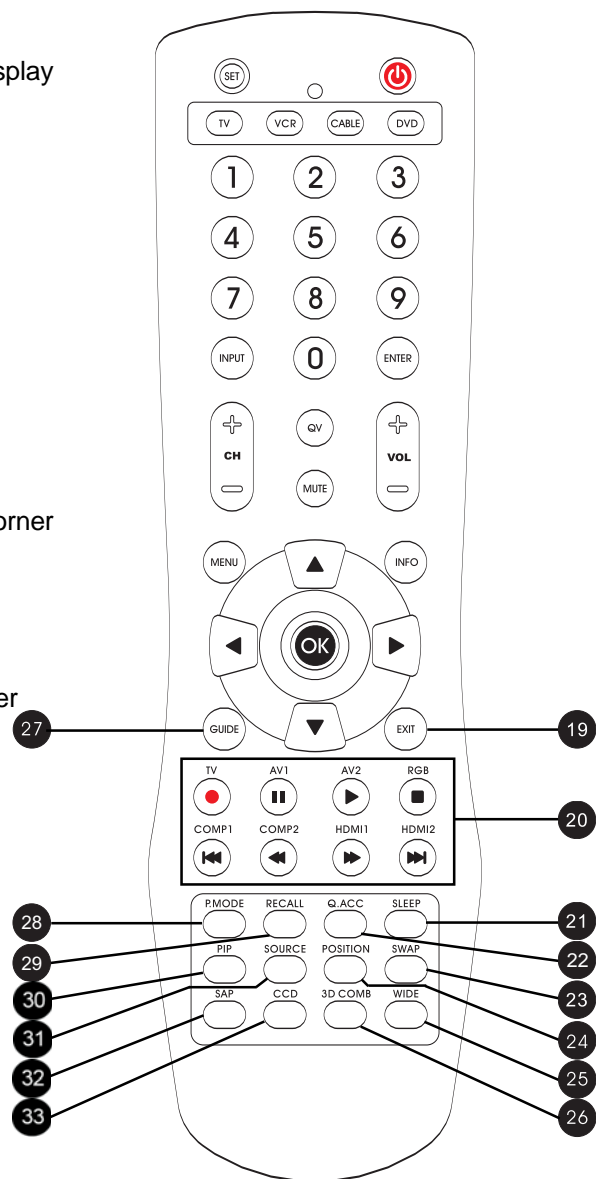
- 1 Standby Power On/Off**  
Push this button to turn on the TV from Standby mode. Push it again to turn off to Standby mode.
  - 2 Cable**  
Use this key to select a programmed cable TV Set-Top Box or a programmed Satellite TV Set-Top Box.
  - 3 DVD**  
Use this key to select a programmed DVD player.
  - 4 SET**  
This key starts all programming sequences.
  - 5 VCR**  
Use this key to select a programmed VCR.
  - 6 TV**  
Use this key to select a programmed TV. Note: this key has been pre-programmed for this TV.
  - 7 Number Keypad**  
Use these buttons to select channels.
  - 8 Enter**  
Use this key to confirm channel selection.
  - 9 QuickView**  
Use this key to quickly switch between the channel currently watched and the channel previously watched.
  - 10 Volume Up/Down**  
Adjust volume up/down.
  - 11 Sound Mute On/Off**  
To switch the sound off and back on again.
  - 12 Info**  
Press to display system information.
  - 13 Adjustment Keys**  
These keys serve as navigation and adjustment keys when On Screen Menu is engaged.
  - 14 Select Keys**  
These keys serve navigation and selection keys when On Screen Menu is engaged.
  - 15 OK**  
Use this key to confirm setting in OSD menu.
  - 16 Input Select**  
Press to select input signal modes sequentially.
  - 17 Channel Up/Down**  
Press these buttons to select the next or previous channel.
  - 18 Menu**  
Engages or turn off the OSD menu.
- Note:**
- Component 2 direct input key is not applicable to this display.



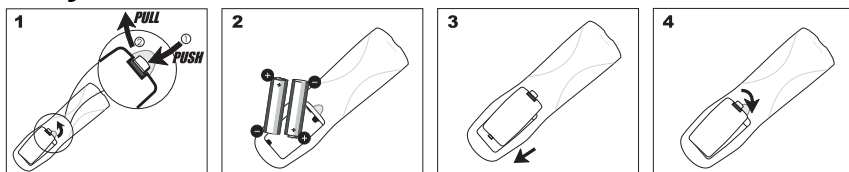
# Getting to Know Your TV

## Remote Control (con't)

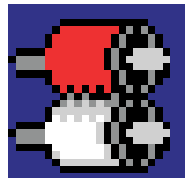
- 19 Exit**  
Press to return to previous menu when On Screen Display Menu is engaged.
- 20 Directly Input Selection Keys**  
Direct change input signal selection by pressing the appropriate key.
- 21 Sleep Timer**  
Engages Sleep Timer settings.
- 22 Quick Access Menu**  
Engages Quick Access Menu.
- 23 Swap**  
This key is not applicable to this TV.
- 24 Position**  
This key changes the PIP sub-window to 4 different corner locations.
- 25 Wide**  
Toggles between various aspect ratio settings.
- 26 3D Digital COMB**  
Filter Direct key. Turn 3D Digital Filter On and Off under AV mode.
- 27 Guide**  
This key is not applicable for this TV.
- 28 Picture Mode**  
Press to select Picture Modes sequentially.
- 29 Recall**  
Recall default picture settings.
- 30 PIP (Picture-in-Picture Button)**  
Turns on PIP feature under TV input mode. Press it again to turn off PIP feature.
- 31 PIP Source**  
Change the input source of the TV PIP sub-window among AV input sources.
- 32 SAP**  
This key is not available for this TV.
- 33 Closed Captioning**  
Turns on Closed Captioning Mode.



## Battery Installation



# Display Connections

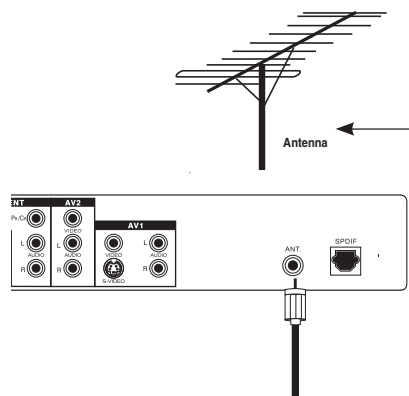


# Display Connections

## Connecting TV, CATV or ATSC

### Connecting to TV, Cable TV or ATSC

- 1 Connecting the RF cable from the antenna or cable socket to the RF connector labeled as ANT. on the back of the TV.



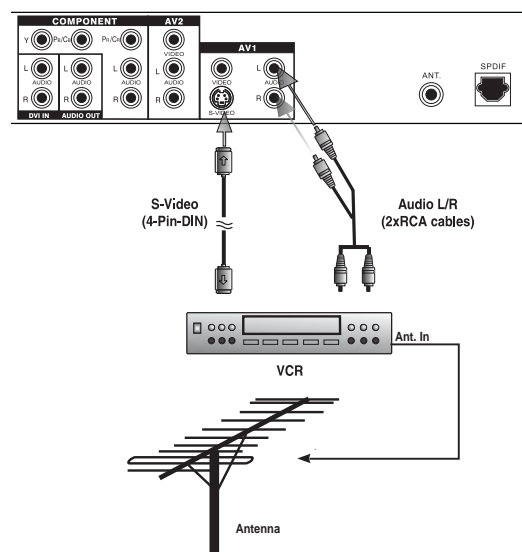
## Connecting a VCR

### Using S-Video Input

- 1 Connect the S-Video (4-pin DIN) connector from the VCR to the S-Video input on the back of TV.
- 2 Connect the red (R) and white (L) audio output from the VCR to the R and L audio input located next to the S-Video connector.

**Note:**

- For TV Channels setup please refer to VCR user manual for details.

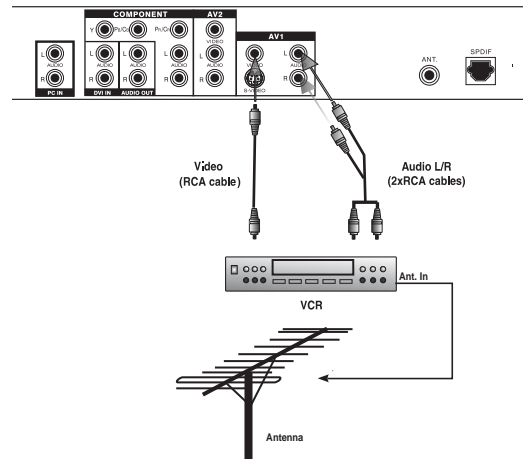


## Using Composite Input

- 1 Connect the Video (yellow) out connector from the VCR to the Video (yellow) input on the back of TV.
- 2 Connect the red (R) and white (L) audio output from the VCR to the R and L audio input located next to the Video (yellow) connector.

### Note:

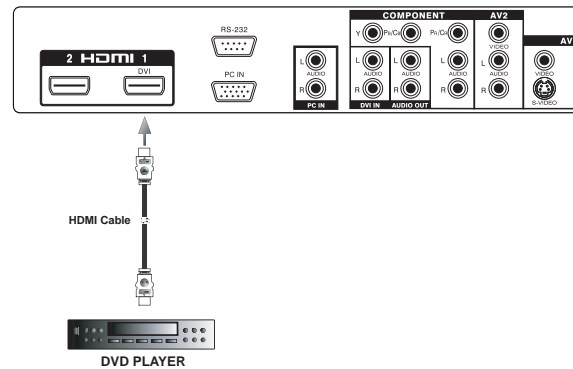
- There are two sets of composite inputs provided.
- For TV Channels setup please refer to VCR user manual for details.



## Connecting a DVD

### Using HDMI Input

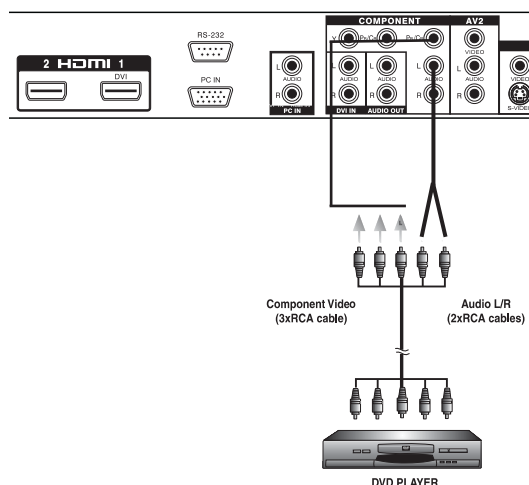
- 1 Connect the HDMI Connector from the DVD to the HDMI input located on the back of the TV.



# Display Connections

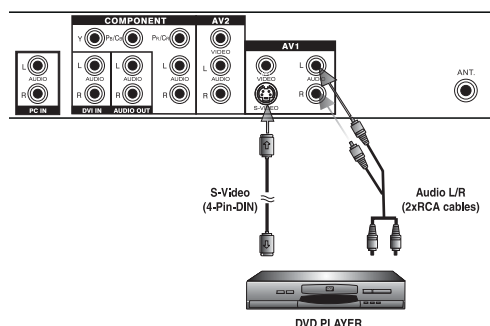
## Using Component Video Input

- 1 Connect the green-colored (labeled as Y) jack from the DVD to the green-colored input of the TV.
- 2 Connect the red-colored (labeled as P<sub>R</sub> or C<sub>R</sub>) jack from the DVD to the red-colored P<sub>R</sub>/C<sub>R</sub> input of the TV.
- 3 Connect the blue-colored (labeled as P<sub>B</sub> or C<sub>B</sub>) jack from the DVD to the blue-colored P<sub>B</sub>/C<sub>B</sub> input of the TV.
- 4 Connect the red (R) and white (L) audio jacks from the DVD to the R and L audio-in input located next to the P<sub>R</sub>/C<sub>R</sub> connector.



## Using S-Video Input

- 1 Connect the S-Video (4-pin DIN) connector from the DVD to the S-Video input on the back of TV.
- 2 Connect the red (R) and white (L) audio jacks from the DVD to the R and L audio-in inputs located next to the S-Video connector.

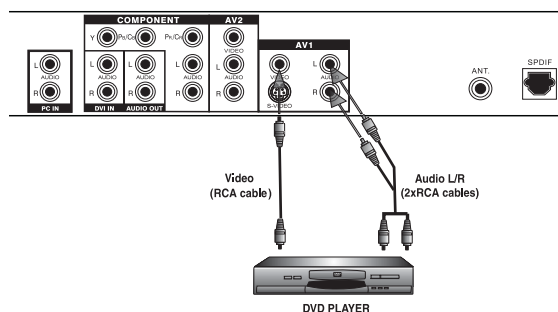


## Using Composite Input

- 1 Connect the Video (yellow) out connector from the DVD to the Video (yellow) input on the back of TV.
- 2 Connect the red (R) and white (L) audio-out jacks from the DVD to the R and L audio-in inputs located next to the Video (yellow) connector.

### Note:

- There are two sets of composite inputs provided.

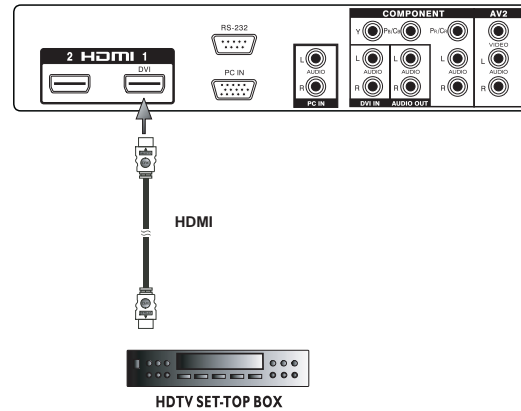




## Connecting a Set-Top Box

### Using HDMI Input

- 1 Connect the HDMI connector from the back of the HDTV Set-Top Box to the HDMI input located on the back of the TV.



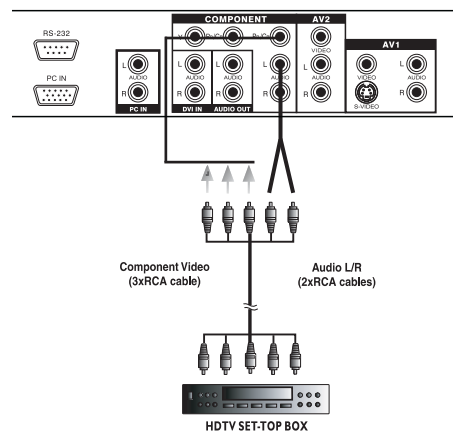
#### Notes:

- Some HDTV Set-Top Boxes may not have a HDMI output. Use Component Video input or PC input method if this is the case.
- Upon connecting your HDTV Set-Top Box to the HDMI input of the TV, it may be necessary to adjust various picture settings on the TV to correctly match the output of the HDTV Set-Top Box. This is caused by the different video timings set by various HDTV Set-Top Box manufacturers.

### Using Component Video Input

Some HDTV Set-Top Boxes may not have a Component Video output. Instead, use PC input method.

- 1 Connect the green-colored (labeled as Y) jack from the Set-Top Box to the green-colored input of the TV.
- 2 Connect the red-colored (labeled as P<sub>R</sub> or C<sub>R</sub>) jack from the Set-Top Box to the red-colored P<sub>R</sub>/C<sub>R</sub> input of the TV.
- 3 Connect the blue-colored (labeled as P<sub>B</sub> or C<sub>B</sub>) jack from the Set-Top Box to the blue-colored P<sub>B</sub>/C<sub>B</sub> input of the TV.
- 4 Connect the red (R) and white (L) audio jacks from the Set-Top Box to the R and L audio-in inputs located next to the P<sub>R</sub>/C<sub>R</sub> connector.

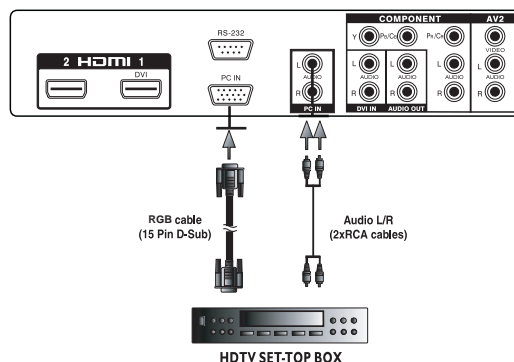


# Display Connections

## Connecting a Set-Top Box

### Using TV Input

- 1 Connect the 15-pin D-Sub RGB connector from the back of the HDTV Set-Top Box to the PC-IN Connector located on the back of the TV.
- 2 Connect the red (R) and white (L) audio-out jacks from the HDTV Set-Top Box to the R and L audio-in jacks located next to the PC-IN Connector.



#### Notes:

- Some HDTV Set-Top Boxes may not have a PC output. Use Component Video input or HDMI input method if this is the case.
- Upon connecting your HDTV Set-Top Box to the PC input of the TV, it may be necessary to adjust various picture settings on the TV to correctly match the output of the HDTV Set-Top Box. This is caused by the different video timings set by various HDTV Set-Top Box manufacturers.

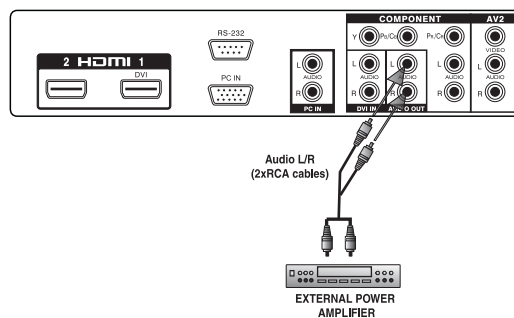
## External Audio Connections

### Connecting to External Amplifiers

- 1 This TV can be connected to an external amplifier using the AUDIO OUT jacks located on the back of the TV.
- 2 Connect the red (R) and white (L) AUDIO OUT jacks from right side of the connector panel to the external amplifier.

#### Note:

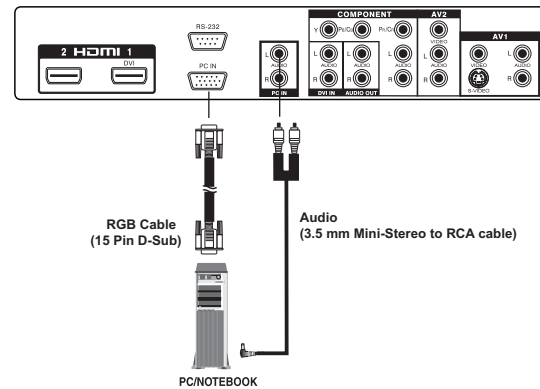
- The AUDIO OUT RCA jacks can be set to either Fixed or Variable audio output levels.



## Connecting a PC

### Using PC Video Input

- 1 For most PCs, connect the 15-pin D-Sub RGB connector from the back of the PC to the PC-IN Connector located on the back of the PC.
- 2 Connect the red (R) and white (L) audio jacks from the PC to the R and L inputs located next to the PC-IN Connector.



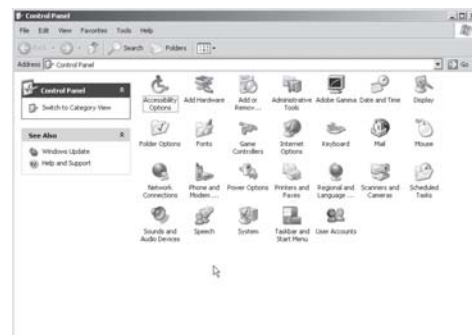
## Setting Up Your TV Using Plug and Play

This TV adheres to VESA Plug and Play standard to eliminate complications when setting up the TV. This TV identifies itself to the computer and automatically sends the PC its Extended Display Identification Data (EDID) using Display Data Channel (DDC) protocols.

## How to Set up Your PC for Use with TV (Windows)

The display settings for a typical Windows-based computer are shown below; however, actual screens on your computer will differ depending on the version of Windows and video card equipped with the computer. Even though the actual screen may look different from example displayed below, basic set-up routine will apply in most cases.

- 1 Go to Window's CONTROL PANEL by clicking: START, SETTINGS, CONTROL PANEL. The CONTROL PANEL Window is displayed. Select the DISPLAY icon from this window.



# Display Connections

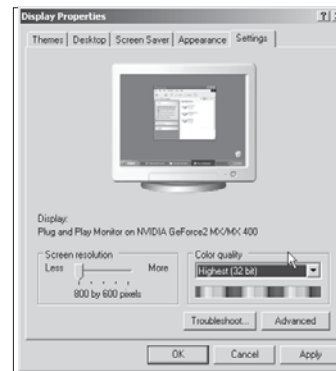
## Connecting a PC (con't)

- 2 The DISPLAY PROPERTIES dialog box is displayed. Select the SETTINGS tab to display your computer's video output settings.

Set the "Screen Resolution" settings to 1280x1024 PIXELS. For COLOR QUALITY, select 32 BIT COLOR (might also be expressed as 16 million colors).

If a vertical-frequency option exists, set the value to 60 or 60 Hz.

Click OK to complete the setting.



### Note:

- Both screen position and size will vary, depending on the type of PC graphics card and its resolution selected.

## Supported Resolutions

This TV supports the following resolutions

Dot x Line	Horizontal Frequency (KHz)	Vertical Frequency (Hz)	Dot Rate (MHz)	Vertical Polarity	Horizontal Polarity
720 x 400@70Hz	31.469	70.087	28.322	+	-
640 x 480@60Hz	31.469	59.940	25.175	-	-
800 x 600@60Hz	37.879	60.317	40.000	+	+
1024 x 768@60Hz	48.363	60.004	65.000	-	-
* 1360 x 768@60Hz	47.712	60.015	85.500	+	+
1280 x 720p@60Hz	45.000	60.000	74.250	+	+
1280 x 1024@60Hz	63.981	60.020	108.00	+	+
1920 x 1080i@60Hz	33.750	60.000	74.250	+	+
720 x 480p@60Hz	31.469	59.940	27.000	-	-

### Note:

- This TV does not support Macintosh resolutions.
- Resolution with \* is only available for 50" TV.



# Basic Operations

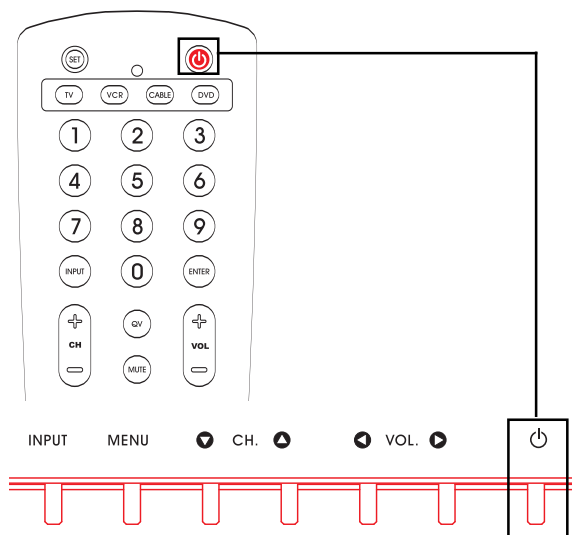


# Basic Operations

## Powering On/Off



### Using Front Panel or Remote Control

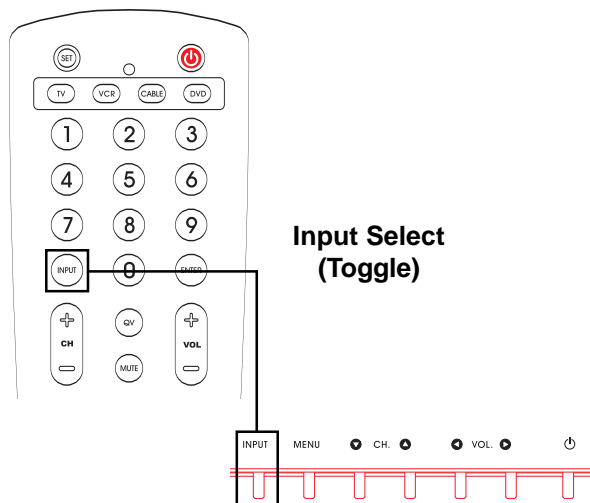
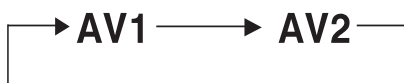
- 1 Press the  key on the panel or the remote control.
- 2 The TV will now turn on after a brief pause. The STATUS LED will now turn green to indicate power on status.
- 3 To turn power off, simply press the  key on the panel or the remote control once again.



## Changing Inputs

### Using Front Panel or Remote Control

- 1 Press the INPUT key on the panel or the  key on the remote control.
- 2 Pressing the  key will cycle the TV through all available input signal sources in the following order:



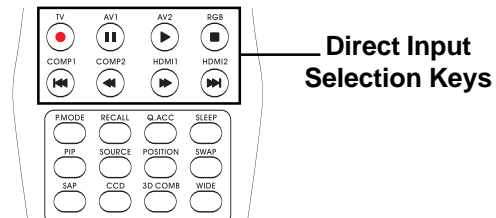
## Using Direct Input Selection Keys

If you prefer not to cycle through all available inputs, you can use the Direct Input Selection keys located towards the bottom of the remote control.

- 1 Simply select the input that you would like to switch to and press the Direct Input Selection keys for that input.

### Note:

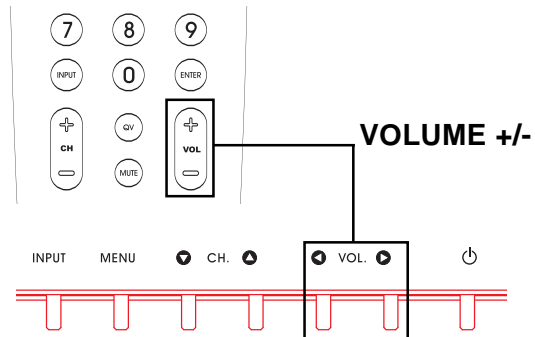
- Component 2 direct input key is not applicable to this TV.



## Volume Adjustment

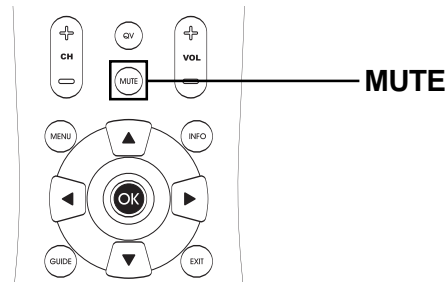
### Using Front Panel or Remote Control

- 1 To turn up sound volume, press VOLUME + on either the front panel of TV or VOL + key on the remote control.
- 2 To turn down sound volume, press VOLUME - on either the front panel of TV or VOL - key on the remote control.



## Using MUTE

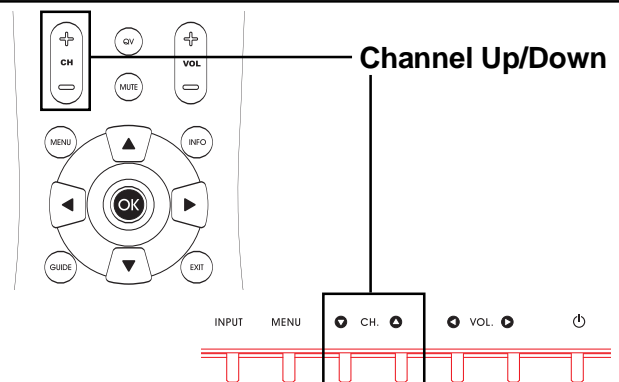
- 1 If you would like to silence the volume on a temporary basis, simply press the MUTE key to silence the volume. When the TV volume is muted, the TV will display MUTE on the upper right corner of the screen.
- 2 To disengage the mute mode, simply press the MUTE key again or the volume buttons.



## Channel Up/Down

### Using Front Panel or Remote Control

- 1 To adjust TV channel up, press channel up on either the front panel of TV or CH + key on the remote control.
- 2 To adjust TV channel down, press channel down on either the front panel of TV or CH - key on the remote control.




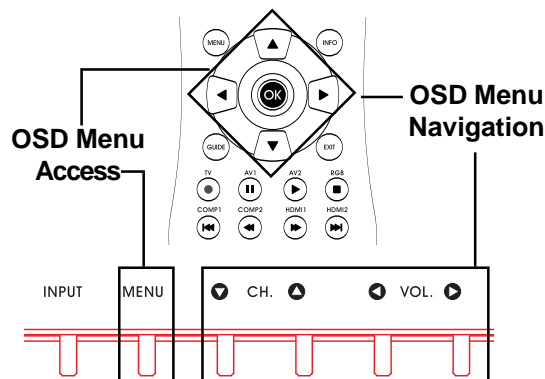
# Basic Operations

## On-Screen Display Menu

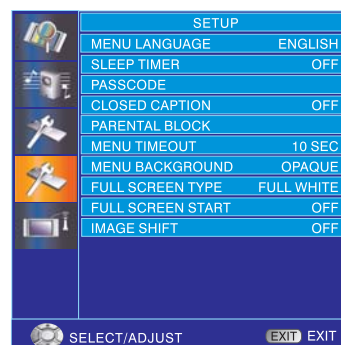
### Accessing OSD Menu via Remote Control or Front Panel

The On-Screen Display (OSD) menu allows access to setup various parameters equipped with this TV.

- 1 To access the OSD menu, press  button or menu key on the front panel of TV.

















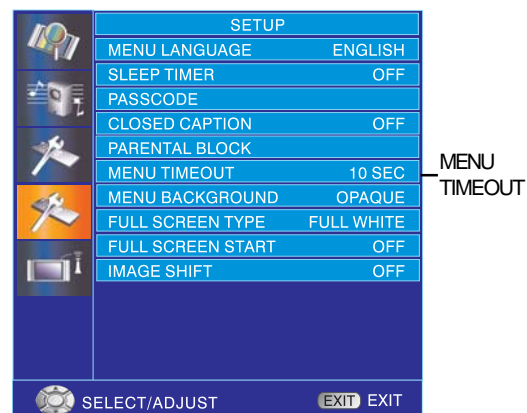
- 2 Navigation through the OSD Menu can be accomplished using the arrow keys on the remote control or using the front panel control keys.



### OSD Menu Timeout Setting

OSD Menu will automatically disappear after a preset period of time so that it doesn't remain on the screen. To change the menu timeout period, please follow the steps below.

- 1 Press  to access the OSD menu. Use   keys to select SETUP from menu then press   or  to enter SETUP menu.
- 2 Use   to select MENU TIMEOUT then press   to enter MENU TIMEOUT setting.
- 3 Use   keys to change your settings. After achieving the desired setting, press  key to return to previous menu or press  to exit menu.





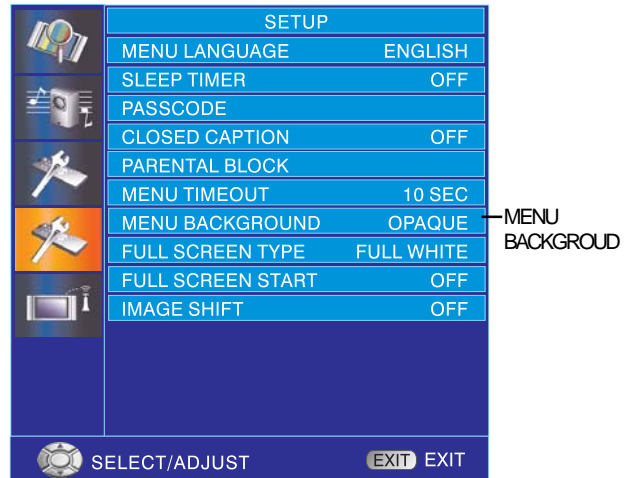
## OSD Menu Background Color Setting

The background color of the OSD Menu can be customized. To change the MENU Background color setting, please follow the steps below.

- 1 Press to access the OSD menu. Use keys to select SETUP then press or to enter SETUP menu.

- 2 Use keys to select BACKGROUND then press to enter MENU BACKGROUND COLOR setting.

- 3 Use keys to change your settings. After achieving desired setting, press key to return to previous menu or press to exit menu.



## On-Screen Status Display

### Displaying Status

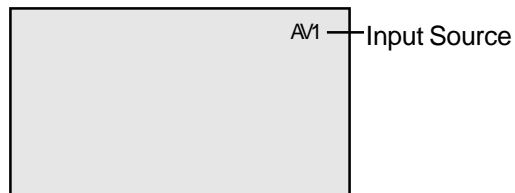
The On-Screen Status Display shows detailed information regarding the operational status of the TV. The status display automatically appears whenever there is a change in the state of the TV such as channel change or input change. The status display will automatically disappear after a period of time.

- 1 To manually show the Status Display, simply press the key on the remote control.

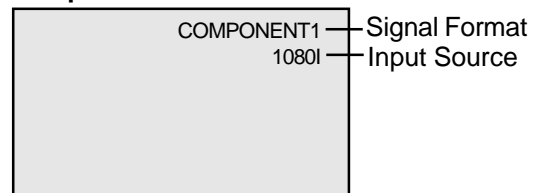
#### Note:

- When using AV1 priority is given to the S-Video input.
- When using S-Video connection AV1 the status display will denote "[S]" to indicate the input source is using S-Video connector.

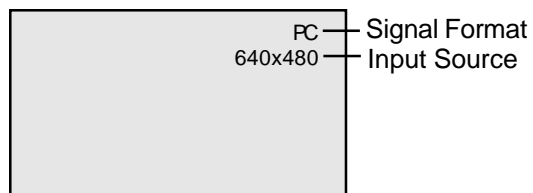
#### AV Mode



#### Component/ HDMI Modes



#### PC Mode



# Basic Operations

## Understanding Widescreen Modes

This TV is capable of displaying a widescreen image on the native 16:9 aspect ratio screen. However, not all available video content fits perfectly in a widescreen (16:9) format resulting in unused screen space. This TV is capable of displaying images in various formats that is suitable for various types of content depending on its size.

### For 4:3 (Square) Content

Content from traditional TV, VCR, and some DVD's are formatted using a "square" 4:3 format. When viewing content in this "Square" format the following viewing modes are suitable.



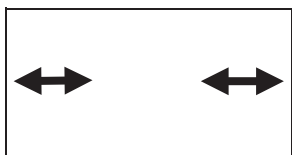
#### 4:3 (NORMAL)

In 4:3 mode, the original 4:3 image is preserved but black bars are used to fill the the extra space on the left and right.



#### 16:9 (FULL)

The original 4:3 image is proportionally stretched to fill the entire screen. This is the default setting from factory.




#### PANOROMIC

The original 4:3 image is expanded in both the horizontal and vertical directions. The center of the picture is almost normal while the edges are considerably expanded.

## Changing Aspect Ratios

### Using Remote Control

- 1 All widescreen viewing modes are available by pressing the  key. Pressing this key repeatedly will cycle through below modes:

#### Analog TV/Composite/S-Video Modes

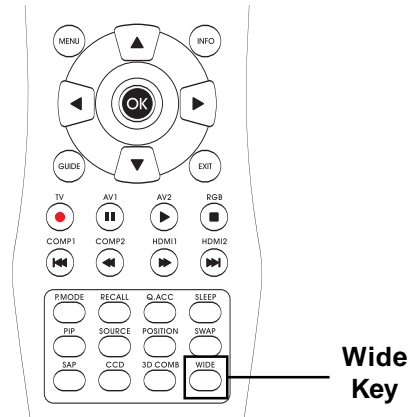
16:9 → 4:3  
PANOROMIC

#### Digital TV





AUTO → 16:9  
4:3





#### Component/HDMI/PC Modes

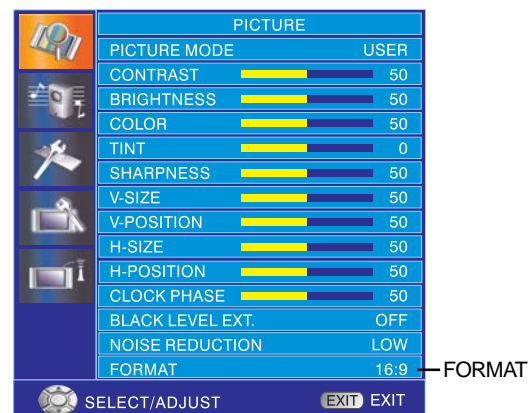
16:9 → 4:3







### Using OSD Menu

- 1 Press  to access the OSD menu. Use  keys to select PICTURE then press   to enter PICTURE menu.

- 2 Press   keys to select FORMAT then use   to enter FORMAT setting.



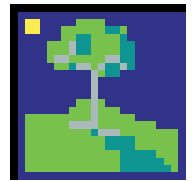
- 3 Use   keys to change your settings. After achieving the desired setting, press  key to return to previous menu or press  to exit menu.

#### Note:

- Under Component, PC and HDMI input modes, only 16:9 and 4:3 modes are available.
- Under Digital TV input modes, only 16:9, 4:3 and Auto modes are available.



# Picture Controls













# Picture Controls

## Adjusting Picture Settings

### Using OSD Menu


Various picture adjustments can be set using the Picture Adjustment OSD menu.

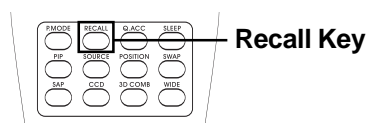
- 1 Press the  key on remote control or MENU key on the front panel. Use   to select PICTURE then press   or  key to enter PICTURE menu.





- 2 Use   to select options then press   keys to confirm selection.

#### Notes:

- H-Position, H-Size, V-Position, V-Size adjustments are only available in HDMI and Component Video input modes.
- To restore picture settings to factory default, simply press the RECALL key from the remote control when the PICTURE menu is displayed.

PICTURE	
PICTURE MODE	USER
CONTRAST	50
BRIGHTNESS	50
COLOR	50
TINT	0
SHARPNESS	50
V-SIZE	50
V-POSITION	50
H-SIZE	50
H-POSITION	50
CLOCK PHASE	50
BLACK LEVEL EXT.	OFF
NOISE REDUCTION	LOW
FORMAT	16:9
SELECT/ADJUST  EXIT	



- 3 A small display window appears upon selecting the option to change. Use   to change the setting. As you change the setting, changes in the picture are immediately reflected in the video picture. After achieving the desired setting, press  to return to previous menu or press  to exit menu.



### Explanation of Various Picture Control Settings

Explanation of each available picture control settings are listed in the table below.

#### PICTURE MODE

There are 4 preset picture modes that you can choose from to optimize the video picture according to the type of programming you are watching. (1)VIVID; (2)STANDARD; (3)CINEMA; (4)USER.

#### CONTRAST

Adjust Contrast to increase or decrease the level of white in the picture. Increasing contrast will make white areas of the video picture brighter. Contrast works in conjugation with Brightness.

## Picture Controls

<b>BRIGHTNESS</b> Adjust brightness to enhance the level of dark areas in the picture such as night scenes and shadow scenes. Increasing brightness will make dark areas more visible.
<b>COLOR</b> Use color to adjust the color saturation of the picture. Increasing color will make the color more intense. Reducing color setting will make the color less intense.
<b>TINT</b> Use tint to adjust the color of fleshtones. Increase in the right direction will shift the picture with more green in appearance. Decreasing setting in left direction will shift the picture with more red in appearance.
<b>SHARPNESS</b> Use sharpness to adjust the amount of detail enhancement to the picture. Increasing the setting will enhance the edges of objects in the picture. Decreasing the setting will reduce enhancement.
<b>BLACK LEVEL EXTENSION</b> To enhance luminance and color transition. There are 2 settings to choose from: (1) ON, (2) OFF.
<b>NOISE REDUCTION</b> To improve the quality of the picture in the case of poor reception.
<b>FORMAT</b> Use to change various screen width modes. There are 2 modes to choose from: (1) 16:9, (2) 4:3. Please see details on page 27.
<b>V-SIZE</b> Use to change vertical size of the picture. Increase to enlarge the picture size in the vertical direction. Decrease to reduce the picture size in the vertical direction.
<b>V-POSITION</b> Use to change vertical position of the picture. Increase to shift the picture up. Decrease to shift the picture down.
<b>H-SIZE</b> Use to change horizontal size of the picture. Increase to enlarge the picture size in the horizontal direction. Decrease to reduce the picture size in the horizontal direction.
<b>H-POSITION</b> Use to change horizontal position of the picture. Increase to shift the picture to the right. Decrease to shift the picture to the left.
<b>CLOCK PHASE</b> Use clock phase to fine-tune the monitor to perfectly synchronize to the video signal source under RGB mode.

### Notes:


- H-Position, H-Size, V-Position and V-Size adjustments are only available in PC, DVI, and Component input modes.

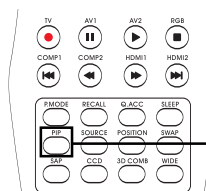
# Picture Controls

## Picture-in-Picture

### Turning On PIP

PIP feature allows users to view two video input sources simultaneously.

- 1 Press the  key once on the remote control to engage in Picture-in-Picture mode. Pressing the key repeatedly will cycle thru the following modes:



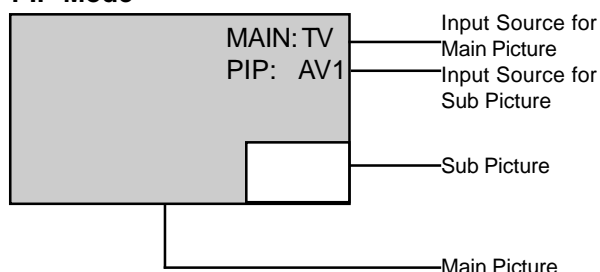
PIP Key

- 2 When engaged in PIP mode, a small window is displayed in one of the four corners. The OSD on the upper right corner will denote the input selected for main picture (large screen) and the sub-picture (small screen) displayed.

#### Note:


- Once PIP is turned off, the next time you return on PIP mode, the position of the sub-window will start at default position.
- PIP feature is only available under TV input mode.

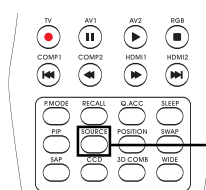
#### PIP Mode



### Selecting Signal Source for Sub-Picture

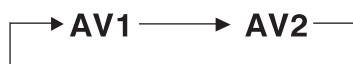
Various signal sources can be displayed within the sub-window under PIP picture mode. To select the input source for sub-window, please follow the steps below.

- 1 Once the PIP mode is turned on, you can change the sub-picture input source by pressing the  key.



Source Select

- 2 Pressing the  key repeatedly will cycle through all available inputs for the sub-picture.



#### Note:

- Please see reference table on next page for available PIP input combinations.
- Sub-Picture feature is not available under S-Video input mode.



## Available PIP Input Combinations

Main-picture and sub-picture input combinations are listed below for reference.



Main Picture		TV	DTV	AV1	AV 2	Comp	PC	HDMI 1	HDMI 2
Sub-Picture	TV	-	-	-	-	-	-	-	-
	DTV	-	-	-	-	-	-	-	-
	AV 1	-	✓	-	-	-	-	-	-
	AV 2	-	✓	-	-	-	-	-	-
	Comp	-	-	-	-	-	-	-	-
	PC	-	-	-	-	-	-	-	-
	HDMI 1	-	-	-	-	-	-	-	-
	HDMI 2	-	-	-	-	-	-	-	-

### Note:

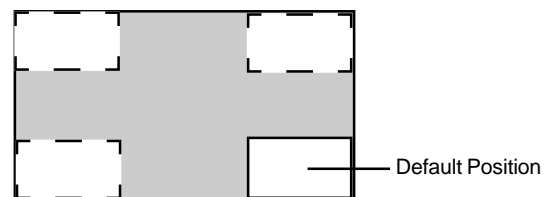
- Sub-Picture feature is not available under S-Video input mode.

## Changing Location of PIP Image

There are four preset positions where the PIP sub-window can be positioned. Once the PIP mode is turned on, you can switch the PIP sub-picture position to any one of the four corners of the screen.







- Press the  key to switch positions. Pressing the  key repeatedly will cycle through all four corners of the screen.





### Sub-Picture Positions

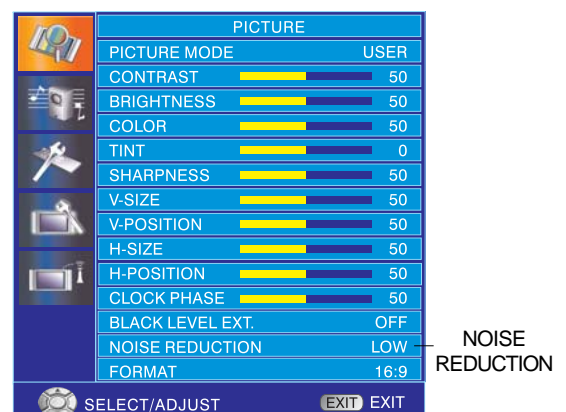






## Noise Reduction

To improve the quality of the picture in the case of poor reception.

- Press  to access the OSD menu and select PICTURE from the menu. Use   keys to select PICTURE then press   or  to enter PICTURE menu.

- Use   keys to select NOISE REDUCTION then press   to enter NOISE REDUCTION setting.













- Use   keys to change your settings. After achieving the desired setting, press  key to return to previous menu or press  to exit menu.





# Picture Controls

## Adjusting Screen Size

Due to the fact that various PC video cards and Set-Top Boxes have different specification, it is likely that the initial picture may not fit exactly to the resolution of the TV. Please use the following procedures to adjust the picture size and position.

- 1 Press  to access the OSD menu and select PICTURE from the menu. Use   keys to select PICTURE then press   or  to enter PICTURE menu.

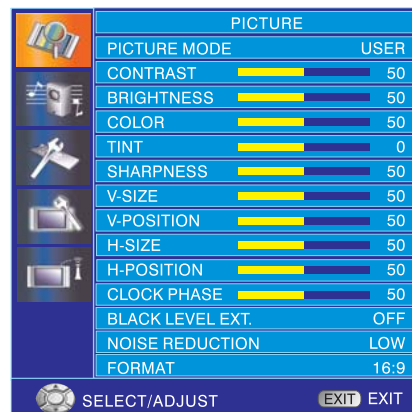
- 2 Use   keys to select V-Size, V-Position, H-Size, and H-Position then press   to enter V-Size, V-Position, H-Size, and H-Position setting.

- 3 Use   keys to change your settings. After achieving the desired setting, press  key to return to previous menu or press  to exit menu.

- 4 Repeat procedure for V-Size, V-Position, H-Size, and H-Position settings until video picture is fully displayed within the TV's display area.

### Notes:

- H-Position, H-Size, V-Position and V-Size adjustments are only available in PC and Component input modes.

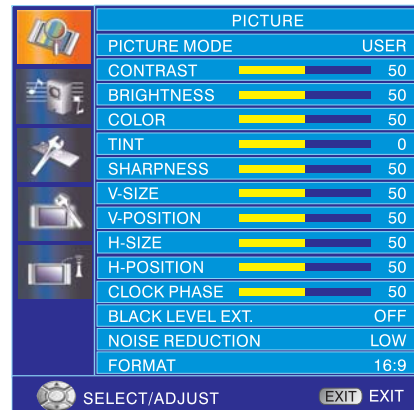


# Picture Controls

## Fine Tuning PC Mode

Due to the fact that various PC video cards and Set-Top Boxes have different specifications, it is likely that the initial video picture have subtle noise or imperfections. Please use the following procedures to adjust the picture quality when using PC mode.

- 1 Press to access the OSD menu and select PICTURE from the menu. Use keys to select PICTURE then press or to enter PICTURE menu.



- 2 Use keys to select CLOCK PHASE then press to enter CLOCK PHASE setting.

CLOCK PHASE

- 3 After achieving the desired setting, press key to return to previous menu or press to exit menu.



## Quick Access Menu

Quick Access menu allows fast access to the most commonly used picture setting controls such as brightness, contrast, V-Size, V-Position, H-Size and H-Position. Please use the following procedures to access and adjust the picture setting.

- 1 Press the on the remote control. Use to change the setting.



- 2 When finished, press key to exit quick access menu directly.







### Note:





- For TV, AV, S-Video and HDMI modes: CONTRAST and BRIGHTNESS are available in QUICK ACCESS menu.
- For Component and PC modes: BRIGHTNESS, CONTRAST, V-SIZE, V-POSITION, H-SIZE and H-POSITION are available in QUICK ACCESS menu.
- Quick Access adjustments are only available when PICTURE MODE is set to "USER".

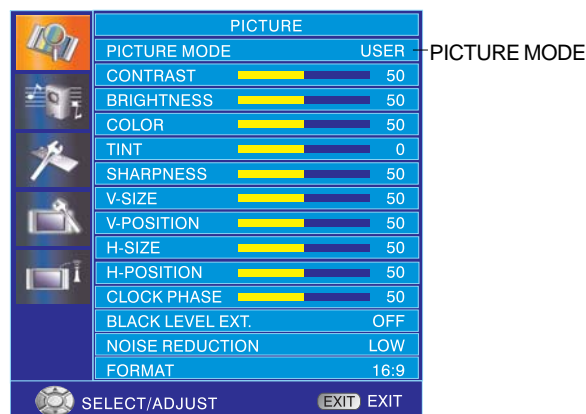
# Picture Controls





## Picture Mode

To choose the pre-set picture modes that best suits the program you are viewing.

- 1 Press  to access the OSD menu and select PICTURE from the menu. Use   keys to select PICTURE then press   or  to enter PICTURE menu.

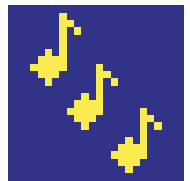
- 2 Use   keys to select PICTURE MODE then press   to enter PICTURE MODE setting.



- 3 Use   keys to change your settings. After achieving the desired setting, press  key to return to previous menu or press  to exit menu.

- CONTRAST, BRIGHTNESS, COLOR and SHARPNESS are not adjustable once PICTURE MODE is set to STANDARD, CINEMA or VIVID.

# Audio Controls












# Audio Controls



## Adjusting Audio Settings

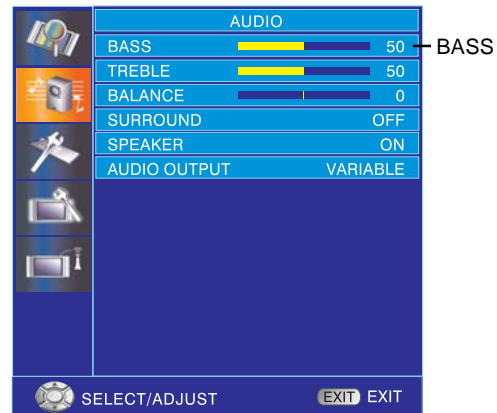
### Using OSD Menu

Various audio adjustments can be set using the audio adjustment OSD menu.

- 1 Press  to access the OSD menu. Use   keys to select AUDIO then press   or  to enter AUDIO menu.

- 2 Use   keys to select BASS then press  to enter BASS setting.

- 3 After achieving the desired setting, press  key to return to previous menu or press  to exit menu.



## Explanation of Various Audio Control Settings

Explanation of each available audio control settings is listed in the table below.







<p><b>BASS</b></p> <p>Adjusts the BASS level of the sound. For more bass response, increase the BASS level.</p>
<p><b>TREBLE</b></p> <p>Adjusts the TREBLE level of the sound. For more vocal and high frequency response, increase the TREBLE level.</p>
<p><b>BALANCE</b></p> <p>Adjusts the BALANCE level between LEFT and RIGHT channels.</p>
<p><b>SURROUND</b></p> <p>This TV is equipped with Surround Sound circuitry. Use Surround Sound to simulate a surround sound effect if you are not using a multi-channel sound setup.</p>
<p><b>SPEAKER</b></p> <p>Set to ON to turn on the TV's internal amplification and internal speakers. Set to OFF to turn off internal amplification and speakers. This setting will not affect AUDIO OUTPUT jacks.</p>
<p><b>AUDIO OUTPUT</b></p> <p>Sets the type of audio output sent from the audio output jacks located in the rear of TV. When set to VARIABLE, audio output is affected by the TV's internal volume controls. When set to FIXED, the audio output bypasses the TV's internal audio control so that functions such as bass, treble, surround and volume controls have no effect.</p>





# Audio Controls





## Using Surround Sound

### Turning On Surround Sound

This TV is equipped with a surround sound circuitry that enhances the sound when using two speakers.

- 1 Press  to access the OSD menu. Use   keys to select AUDIO then press   or  to enter AUDIO menu.

- 2 Use   keys to select SURROUND then press   to enter SURROUND setting.

- 3 Use   keys to change your settings. After achieving the desired setting, press  key to return to previous menu or press  to exit menu.















## Built-in Amplification (Speaker)





### Turning On Built-in Amplification

This TV is equipped with a built-in amplification for optional external speakers. You can switch the amplification ON or OFF using the OSD. Because these speakers are standard you may consider switching them OFF during hi-fidelity playback of movies or other content.

- 1 Press  to access the OSD menu. Use   keys to select AUDIO then press   or  to enter AUDIO menu.



- 2 Use   keys to select SPEAKER then press   to enter SPEAKER setting.







- 3 Use   keys to change your settings. After achieving the desired setting, press  key to return to previous menu or press  to exit menu.

# Audio Controls

## Fixed / Variable Audio Output





### Setting Output Using OSD Menu





You can set the type of output from the rear panel audio output jacks. By using OSD menu, you can easily choose between variable or fixed audio outputs.

- 1 Press  to access the OSD menu. Use   keys to select AUDIO then press   or  to enter AUDIO menu.

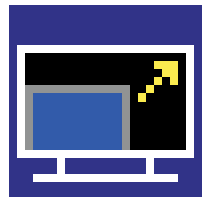


AUDIO  
OUTPUT

- 2 Use   keys to select AUDIO OUTPUT then press   to enter AUDIO OUTPUT setting.

- 3 Use   keys to change your settings. After achieving the desired setting, press  key to return to previous menu or press  to exit menu. When set to VARIABLE, audio output is affected by the TV's internal audio controls. When set to FIXED, the audio output bypasses the TV's internal audio controls.

# Advanced Functions



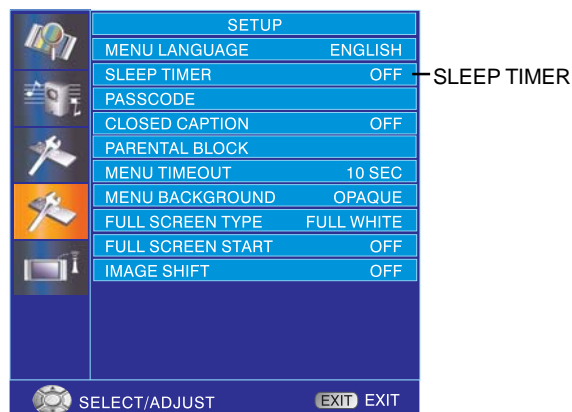
## Advanced Functions

### Sleep Timer

#### Setting Sleep Timer Using OSD Menu

This TV has built-in sleep timer function. Once set, the TV will automatically shut-off without user intervention.

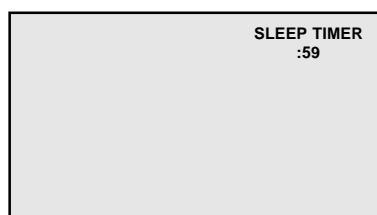
- 1 Press to access the OSD menu. Use keys to select SETUP then press or to enter SETUP menu.



- 2 Use keys to select SLEEP TIMER then press to enter SLEEP TIMER setting.

- 3 Use keys to change your settings. Available settings are: OFF, 15MIN, 30MIN, 45MIN, 60MIN, 90MIN and 120MIN. After achieving the desired setting, press key to return to previous menu or press to exit menu.

- 4 The TV will function normally until the 1-minute mark. At the 1-minute mark, the sleep timer will display a second by second countdown clock to notify you that the TV is about to turn off.



### OSD Menu Language

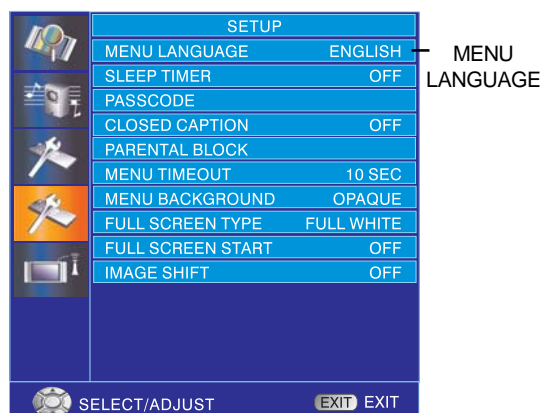
#### Setting OSD Menu Language

This TV has multiple OSD Menu languages built-in including: English, French and Spanish.

- 1 Press to access the OSD menu. Use keys to select SETUP then press or to enter SETUP menu.

## Advanced Functions

- 2 Use keys to select MENU LANGUAGE then press to enter MENU LANGUAGE setting.



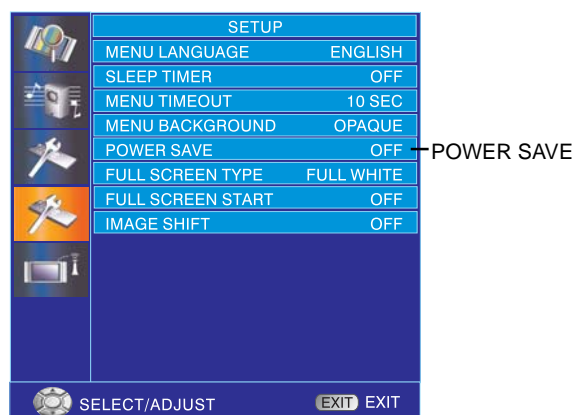
- 3 Use to select the desired OSD language. Available settings are: ENGLISH, FRENCH and SPANISH. After achieving the desired setting, press key to return to previous menu or press to exit menu.

## Power Save Mode

### Setting Power Save Mode Using OSD Menu

This TV is equipped with a Power Save mode under PC input modes. When there are no signals detected by the TV, the TV will automatically go into sleep mode until signal is restored.

- 1 Press to access the OSD menu. Use keys to select SETUP then press or to enter SETUP menu.



- 2 Use keys to select POWER SAVE then press to enter POWER SAVE setting.

- 3 Use to select the desired amount of time for power down after a signal is no longer detected. Available settings are: 1MIN, 2MIN, 3MIN, 4MIN and 5MIN. After achieving the desired setting, press key to return to previous menu or press to exit menu.

#### Note:

- To turn on TV from sleep mode, simply follow Power On procedure.

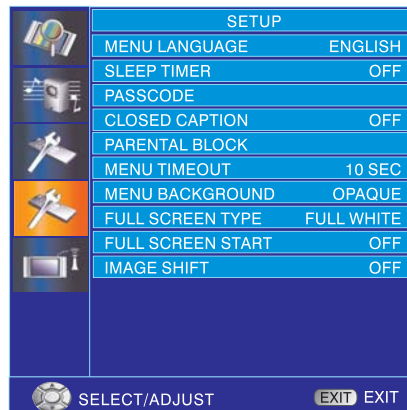
## Advanced Functions

### Image Shift

Image Shift screen eliminates electrically charged residual images and prevents burn-in images.

- 1 Press to access the OSD menu. Use keys to select SETUP then press or to enter SETUP menu.

- 2 Use keys to select IMAGE SHIFT then press to enter IMAGE SHIFT setting.



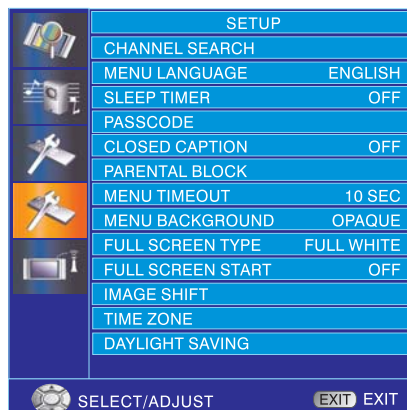
—IMAGE SHIFT

- 3 Use to change the setting. Available options are: OFF, 10 SEC, 20 SEC and 30 SEC. After achieving the desired setting, press key to return to previous menu or press to exit menu.

### Time Zone

- 1 Press to access the OSD menu. Use keys to select SETUP then press or to enter SETUP menu.

- 2 Use keys to select TIME ZONE then press to enter TIME ZONE setting.



—TIME ZONE

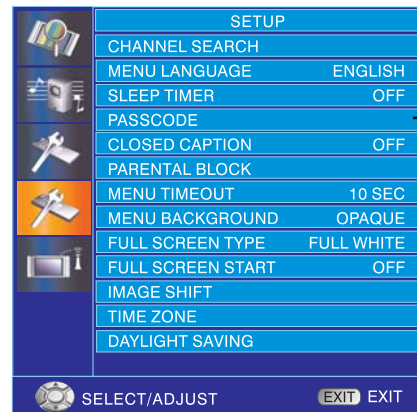
- 3 Use to change the setting. Available options are: SAMOA, HAWAII, ALASKA, PACIFIC, MOUNTAIN, CENTRAL, EASTERN and ATLANTIC. After achieving the desired setting, press key to return to previous menu or press to exit menu.

## System Passcode

### Setting System Passcode

The system passcode setting is used in conjunction with V-Chip (Parental Guide) and Channel Lock functions. The same security passcode is used for both functionality. By default, this TV is programmed with the security passcode set at 0000.

- 1 Press to access the OSD menu. Use keys to select SETUP then press or to enter SETUP menu.



- 2 Use to select the PASSCODE option then press to enter PASSCODE menu.

- 3 A small display window appears prompting the user to enter the existing passcode. Use the number keys on the remote control to input the code. If the code has not been set before, please use the default "0000" code.



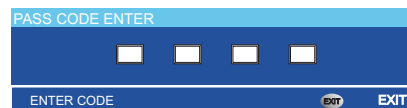
- 4 As each numeric digit is entered, a small "X" fills each slot. If the code entered is incorrect, an "Error" status is displayed. Simply re-enter the passcode again.



#### Notes:

- When entering the 4-digit passcode, please enter the digits slowly. The TV will display "X" in each of the number slots as it receives the passcode.
- If the wrong passcode is entered three times, the TV will go back to the SETUP menu. Repeat the above procedure to reset your passcode.

#### Error Condition



- 5 After the original passcode is entered correctly, the TV will now prompt the entering of a new passcode. Enter a four digit passcode using the numeric keypad on the remote control.



## Advanced Functions

- 6 Re-enter the new passcode one more time to confirm.

### Note:

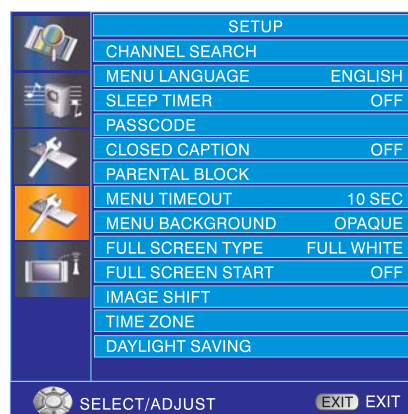
- If the wrong passcode is entered three times, the monitor will go back to the previous step and request a new passcode to be set again.
- Please contact authorized customer service center if you forget the pass code.



## Daylight Saving

- 1 Press to access the OSD menu. Use keys to select SETUP then press or to enter SETUP menu.

- 2 Use keys to select DAYLIGHT SAVING then press to enter DAYLIGHT SAVING setting.



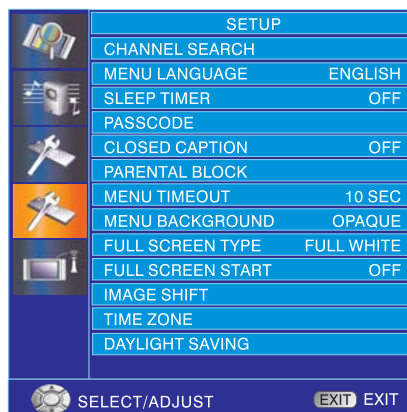
- 3 Available options are: OFF and ON. After achieving the desired setting, press key to return to previous menu or press to exit menu.



## Full Screen Type

- 1 Press to access the OSD menu. Use keys to select SETUP then press or to enter SETUP menu.

- 2 Use keys to select FULL SCREEN TYPE then press to enter FULL SCREEN TYPE setting.



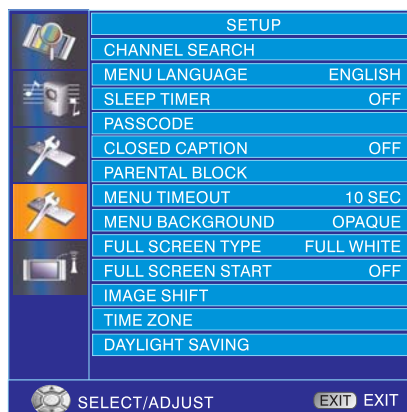
FULL SCREEN  
TYPE

- 3 Use to change the setting. Press to return to previous menu or press to exit the menu.

## Full Screen Start

- 1 Press to access the OSD menu. Use keys to select SETUP then press or to enter SETUP menu.

- 2 Use keys to select FULL SCREEN START then press to enter FULL SCREEN START setting.

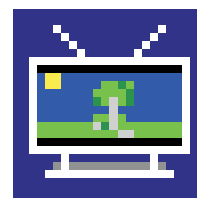


FULL SCREEN  
START

- 3 Use to change the setting. Press to return to previous menu or press to exit the menu.

## Advanced Functions

# TV Functions









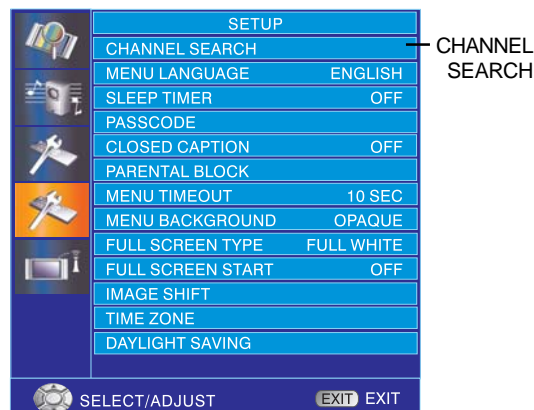
# TV Functions





## Memorizing Channels



### Setting Tuner to AIR or CABLE

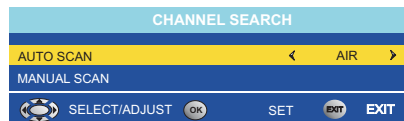
The TV tuner is compatible with Cable TV or standard reception using an antenna. Users must setup the tuner to either AIR or CABLE reception modes prior to memorizing channels.





- 1 Press  to access the OSD menu. Use   keys to select SETUP then press   or  to enter SETUP menu.

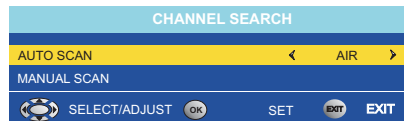


- 2 Use   keys to select CHANNEL SEARCH from the SETUP menu. Press   to enter CHANNEL SEARCH setting.

- 3 The CHANNEL SEARCH menu is now displayed. Use   keys to select AUTO SCAN.



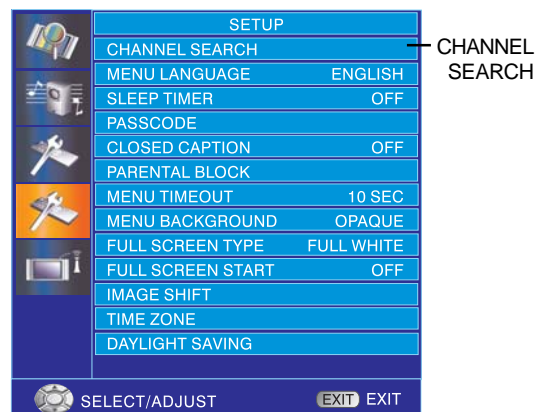
- 4 Use   keys to set the TV tuner to AIR or CABLE. If you are using an indoor/outdoor TV antenna, please select AIR. If you are using Cable TV, please select CABLE. When complete, press  to return previous menu or press  key to exit menu.



## Channel Search

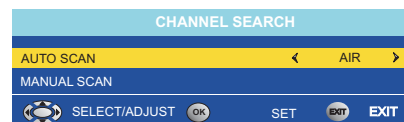
After setting the TV Tuner to either AIR or CABLE reception mode, use the TV's internal channel search mode to automatically scan for available TV stations.

- 1 Press to access the OSD menu. Use keys to select SETUP then press or to enter SETUP menu.

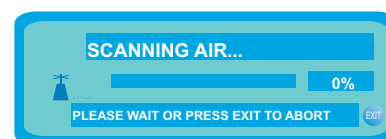


- 2 Use keys to select CHANNEL SEARCH from the SETUP menu then press to enter CHANNEL SEARCH setting.

- 3 The TV TUNER setup menu is now displayed. Use keys to select AUTO SCAN to start to scan.



- 4 The TV will now search all available channels. It may take several minutes for the search to complete. When the search is complete, the screen will display 100% to indicate the search is finished.




# TV Functions

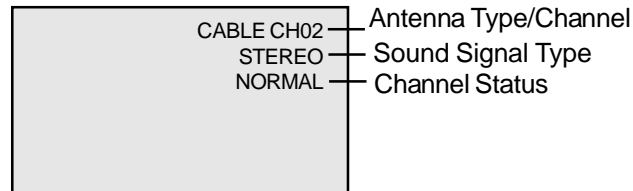
## On-Screen Status Display (TV / Digital TV Mode)

### Displaying Status

The On-Screen Status Display shows detailed information regarding the operational status of the TV under TV mode. The status display automatically appears whenever there is a change in TV channels. The status display will automatically disappear after a timeout period.

- 1 To manually show the Status Display, simply press the  key on the remote control.

### TV Mode



### Digital TV Mode

2-1 KNBC	Afternoon News	April 13, 2006	12:14pm
Barbara Walters gets attacked by George Bush Sr. for making lewd, suggestive comments during an interview with the ex-president. Rumors have it that Walters, a successful journalist, has a very rare disorder which causes her to lust after wrinkly old men. More tonight, on 20/20.			(PG-13) (CC) (1080i)

## Explanation of Channel Status

### NORMAL

Channel is available for normal viewing.

### ERASE

Channel is set to ERASE to make the channel un-available for viewing. When you use CH UP/DOWN keys to scroll thru channels, this channel will skip. However, this channel can still be tuned by manually keying the channel using the number keypad on the remote.

### CH ADD

Channel is set to ADD to make the channel available for viewing. When you use CH UP/DOWN keys to scroll thru channels, this channel will appear.

### FAV

Channel is set to Favorite status so that it can be recalled using the FAV.CH key.

### LOCK

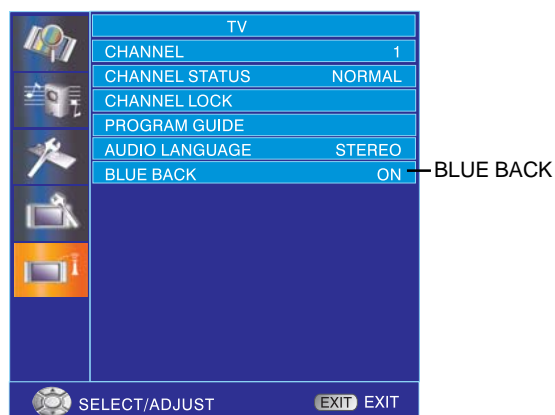
Channel is set to LOCK to block the channel from viewing unless a passcode is set.

## Blue Back

### Turning on Blue Back

Blue Back setting eliminates the “snowflake” effect that results when a TV channel is not available by displaying a blue colored background.

- 1 Press **MENU** to access the OSD menu. Use **▲** **▼** keys to select TV then press **◀ ▶** or **OK** to enter TV menu.



- 2 Use **◀ ▶** keys to change BLUE BACK settings.

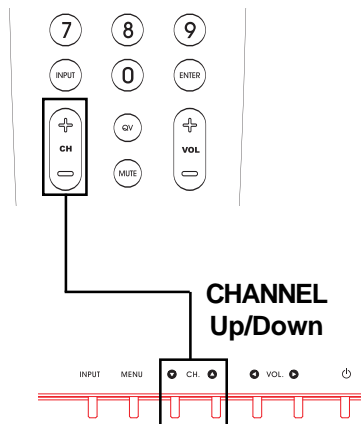
- 3 After achieving the desired setting, press **MENU** key to return to previous menu or press **EXIT** to exit menu.

## Changing Channels

### Using Remote Control or Front Panel

To change TV channels, users can use either the remote control or the front panel keys.

- 1 Switch input to TV. Press **CH** button on the remote control. To use the front panel, press CH. UP/DOWN Keys to adjust the TV channel.



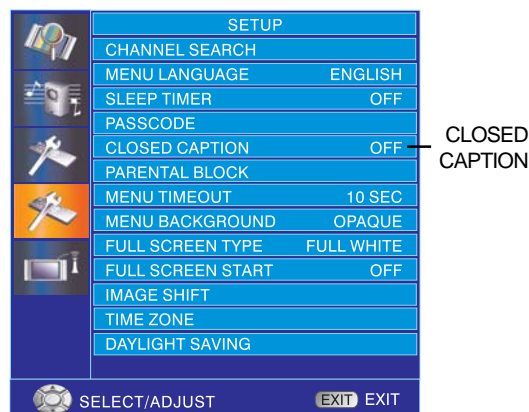
# TV Functions

## Closed Captioning (Analog/Digital TV Modes)

This TV supports Closed Captioning feature by displaying various texts related to television programs on the display.

### Accessing via OSD Menu

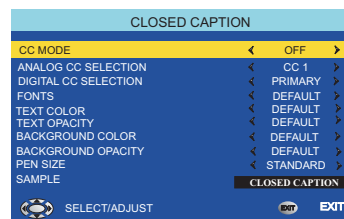
- 1 Press to access the OSD menu. Use keys to select SETUP then press or to enter SETUP menu.



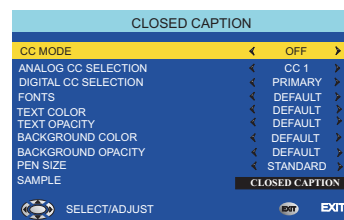
- 2 Use keys to change CLOSED CAPTION settings.

- 3 After achieving the desired setting, press key to return to previous menu or press to exit menu.

### Analog Mode

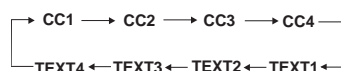


### Digital Mode

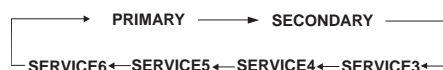


- 4 Press the key on the remote control will cycle all available settings in following order:

### Analog Mode



### Digital TV Mode






## Explanation of Various Closed Captioning Font Settings

Explanation of each available Closed Captioning Font settings under Digital TV mode are listed in the table below:

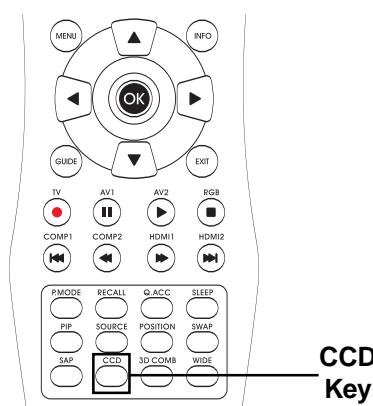
<b>Font</b> There are 9 preset font style that you can choose. (1) DEFAULT, (2) STYLE 1, (3) STYLE 2, (4) STYLE 3, (5) STYLE 4, (6) STYLE 5, (7) STYLE 6, (8) STYLE 7, (9) STYLE 8.
<b>TEXT COLOR</b> Use to change color of font. There are 9 settings to choose form: (1) DEFAULT, (2) WHITE, (3) BLACK, (4) RED, (5) GREEN, (6) BLUE, (7) YELLOW, (8) MAGENTA, (9) CYAN.
<b>TEXT OF OPACITY</b> Use to change opacity of font. There are 5 settings to choose from : (1) DEFAULT, (2) OPAQUE, (3) TRANSLUCENT, (4) TRANSPARENT, (5) FLASHING.
<b>BACKGROUND COLOR</b> Select the color of text box. There are 9 settings to choose form: (1) DEFAULT, (2) WHITE, (3) BLACK, (4) RED, (5) GREEN, (6) BLUE, (7) YELLOW, (8) MAGENTA, (9) CYAN.
<b>BACKGROUND OPACITY</b> Use to change opacity of text box. There are 5 settings to choose from : (1) DEFAULT, (2) OPAQUE, (3) TRANSLUCENT, (4) TRANSPARENT, (5) FLASHING.
<b>PEN SIZE</b> Select the Pen Size. (1) DEFAULT, (2) STANDARD, (3) LARGE, (4) SMALL.

## Accessing via Remote Control

- 1 Press the  key on the remote control repeatedly to cycle through all available Closed Captioning modes.

### Notes:

- Closed captioning is only available under TV/AV/ S-Video inputs.



# TV Functions

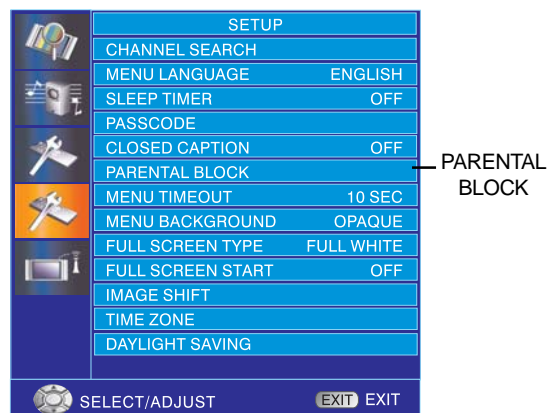
## Parental Block (V-Chip)

V-Chip (Parental Guide) function is to prevent children from watching programs that are not suitable such as violent or adult content. The user must enter a PASSCODE before any of the V-Chip restrictions are set up or changed.

### Enabling V-Chip

V-Chip is initially shipped from the factory set to OFF. To enable V-Chip, please follow the steps below.

- 1 Press to access the OSD menu. Use keys to select SETUP then press or to enter SETUP menu.



- 2 Use keys to select PARENTAL BLOCK from SETUP options and press to enter PARENTAL BLOCK settings.

- 3 A window will now prompt the user to enter a PASSCODE using the remote control. If the default system PASSCODE has not been changed, enter 0000 (this is the initial default from factory).



- 4 As each numeric digit is entered, a small "X" fills each slot. If the code entered is incorrect, an "Error" status is displayed. Simply re-enter the passcode again.

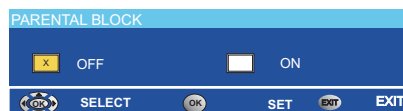


#### Notes:

- When entering the 4-digit passcode, please enter the digits slowly. The TV will display "X" in each of the number slots as it receives the passcode.
- If the wrong passcode is entered three times, the TV will go back to the SETUP menu.



- 5 After the original passcode is entered correctly, the TV will now show the V-Chip ON/OFF window. Use keys to select ON or OFF. After making selection, confirm your selection by pressing the key. If ON is selected, please proceed to the next section. If OFF is selected, the TV will display SETUP COMPLETED briefly and return user to normal viewing.

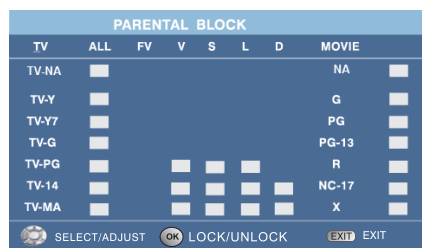


## Setting Restrictions Using TV Guidelines

Prior to setting restrictions, users must first enable the V-Chip. After V-Chip is enabled, parental restrictions can be set using TV guidelines or the MPAA rating. This section covers setting restrictions using TV guidelines.

- 1 After V-Chip is enabled, users are presented with the TV Guidelines menu. Within this menu, there are six age-based categories:

TV-Y	Young children
TV-Y7	Children 7 and over
TV-G	General audience
TV-PG	Parental guidance
TV-14	Viewers 14 and over
TV-MA	Mature audience

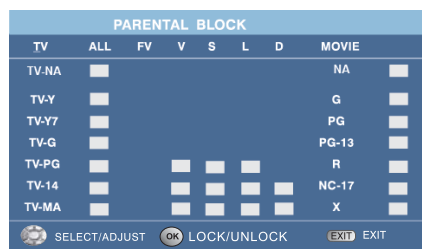


In addition, you can choose to block all TV content for the entire age-based group or choose to block only certain types of content depending on their sub-ratings. For each age-based group, applicable sub-ratings may include:

FV	Fantasy Violence
D	Sexual Dialog
L	Adult Language
S	Sexual Situations
V	Violence

You will notice a letter U or letter B display. These letters represent the status block setting where U=Unblock and B=Blocked.

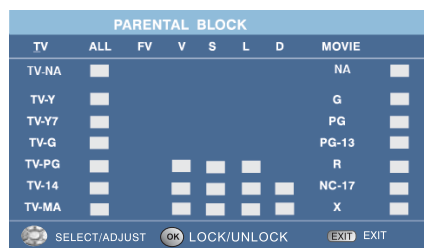
- 2 Use keys to navigate through each age-based group and sub-rating categories within this menu. Use the key to set each available setting to either U or B. To set TV content restrictions for the entire age-based group regardless of sub-rating categories, simply set U or B under the ALL column.



# TV Functions

## Parental Block (con't)

- When all desired settings are complete, navigate to NEXT PAGE option and press **OK** key to complete your setting. Once this is complete, the TV will prompt to the RESTRICTIONS USING MPAA RATING menu described in the next section.



### Note:

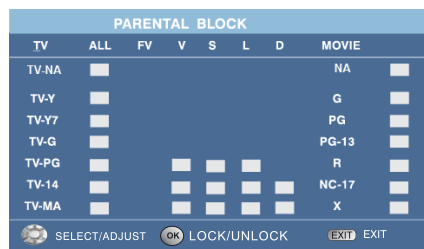
- V-Chip will automatically block higher categories that are more restrictive. For example, if users block TV-Y7 category, then TV-G and higher categories (TV-PG, TV-14, TV-MA) will automatically be blocked. The sub-ratings (D, L, S, V) also works similarly.

## Setting Restrictions Using MPAA Guidelines

The MPAA guidelines uses the Motion Picture Association of America system for applying restrictions on movies being watched on the TV. When the V-Chip is set to on, the TV will automatically block all content that are coded with objectionable ratings as set using either MPAA or TV guidelines.

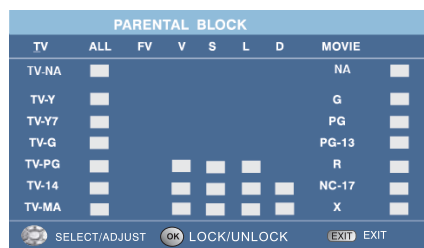
- After TV Guidelines are set, users are presented with the MPAA Guidelines menu. Within this menu, there are seven MPAA categories:

G	General Audience (No Restrictions)
PG	Parental Guidance
PG-13	Parents Strongly Cautioned
R	Restricted
NC-17	No One Under 17
X	Adults Only



For each category, you will notice a letter U or letter B display. U=Unblock and B=Blocked.

- Use **▲** **▼** keys to navigate through each category within this menu. Use the **OK** key to set each category to either U or B.



## TV Functions

- When all desired settings are complete, navigate to FINISH option and press **OK** key to complete your setting. Once this is complete, the TV will display V-CHIP SETUP COMPLETE and return you to normal viewing.

**Note:**

- V-Chip will automatically block higher categories that are more restrictive. For example, if users block PG-13 category, then PG-13 and higher categories (R, NC-17, X) will automatically be blocked.

PARENTAL BLOCK									
TV	ALL	FV	V	S	L	D	MOVIE		
TV-NA	<input type="checkbox"/>						NA	<input type="checkbox"/>	
TV-Y	<input type="checkbox"/>						G	<input type="checkbox"/>	
TV-Y7	<input type="checkbox"/>						PG	<input type="checkbox"/>	
TV-G	<input type="checkbox"/>						PG-13	<input type="checkbox"/>	
TV-PG	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		R	<input type="checkbox"/>	
TV-14	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	NC-17	<input type="checkbox"/>	
TV-MA	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X	<input type="checkbox"/>	

### Using V-Chip

The V-Chip will block all incoming content that meets the guidelines set in the previous section. When this occurs, the TV's screen will display "BLOCKED". To resume normal viewing, please change to a different TV channel. Under certain conditions, the V-Chip may block all channels. If this should occur, simply disable the V-Chip function.

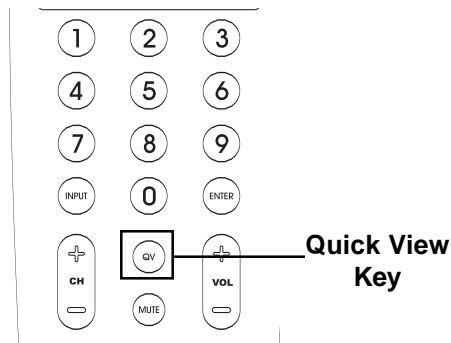
**Note:**

- When V-Chip is enabled, PIP/ POP functions will be disabled.

### Quick View

Quick View allows you to quickly switch between the channel currently watched and the channel previously watched.

- Simply press the **QV** key on the remote control to switch. Repeated pressing of the **QV** key will switch the channels back and forth between the two.



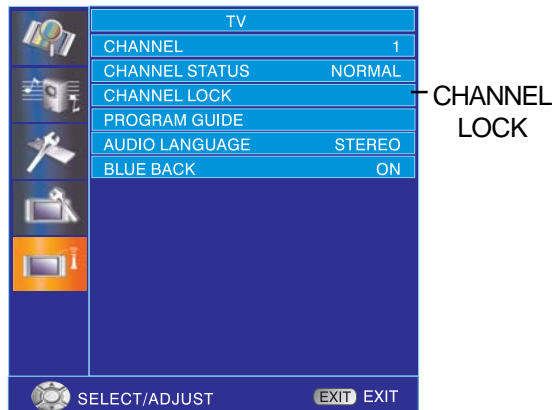
# TV Functions

## Channel Lock

### Setting Channel Lock

Set channel lock to block a TV channel from viewing.

- 1 Press to access the OSD menu. Use keys to select TV from the menu then press or to enter TV menu..

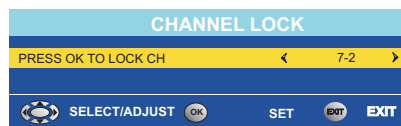


- 2 Use keys to select CHANNEL LOCK from TV options and press to enter CHANNEL LOCK settings.

- 3 A window will now prompt the user to enter a PASSCODE using the remote control. If the default system PASSCODE has not been changed, enter 0000 (this is the initial default from factory).



- 4 As each numeric digit is entered, a small "X" fills each slot. If the code entered is incorrect, an "Error" status is displayed. Simply re-enter the passcode again. After setting the passcode, the channel is now locked and viewing is not possible unless the same passcode is entered.



#### Notes:

- When entering the 4-digit passcode, please enter the digits slowly. The TV will display "X" in each of the number slots as it receives the passcode.
- If the wrong passcode is entered three times, the TV will go back to normal viewing state.

### Viewing a Locked Channel

To watch a channel that is locked, please follow the steps below:

- 1 When a channel is locked and selected for viewing by the user, the screen will prompt the user to enter the same PASSCODE that was used to set the channel lock.



- Enter the 4-digit PASSCODE using the numeric keypad on the remote control.



- As each numeric digit is entered, a small "X" fills each slot. If the code entered is incorrect, an "Error" status is displayed. Simply re-enter the passcode again. After setting the passcode, the channel will be unlocked for viewing.



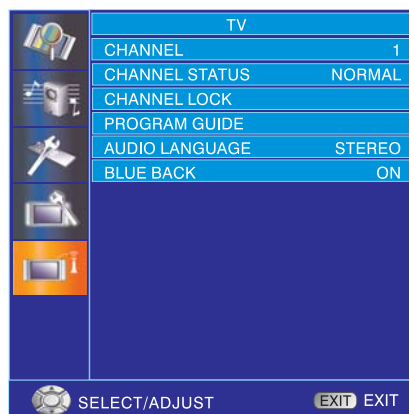
## Notes:

- When entering the 4-digit passcode, please enter the digits slowly. The TV will display "X" in each of the number slots as it receives the passcode.
- If the wrong passcode is entered three times, the monitor will go to the previously viewed channel.
- Once the passcode is entered correctly, the TV will unlock all locked channels without prompting the entry of the passcode again until the monitor is powered off and on again.

## Program Guide

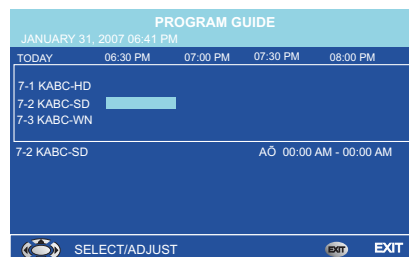
### Turning on Program Guide

- Press to access the OSD menu. Use keys to select TV then press or to enter TV menu.



- Use keys to change PROGRAM GUIDE settings.

- The PROGRAM menu is now displayed. Use keys to select options. Press key to previous menu or press to exit menu..



# TV Functions

## Understanding HDTV

### What is Digital Television or DTV?

Digital TVs are televisions that can receive and display digital television broadcasts sent using any one of three following categories: HDTV (High Definition TV), EDTV (Enhanced Digital TV), and SDTV (Standard Definition TV).

### What is the Difference Between HDTV, EDTV, and SDTV?

HDTV, EDTV, and SDTV are three grades of television or monitors. They reference the maximum resolution capability of a digital television or monitor to fully display digital broadcasts without having to down-convert the actual signal content to fit the monitors display limitations. The resolution requirements for each of the three DTV classifications and an explanation of the specifications are described below:



Vertical Res. <sup>1</sup>	Horizontal Res. <sup>2</sup>	Aspect Ratio <sup>3</sup>	Scan Method <sup>4</sup>
1080 lines	1920 dots	16:9 Wide	Interlaced
720 lines	1280 dots	16:9 Wide	Progressive

HDTV grade televisions and monitors are capable of displaying a maximum of either 1080 lines using interlaced scan method or 720 lines using progressive scan method.



Vertical Res. <sup>1</sup>	Horizontal Res. <sup>2</sup>	Aspect Ratio <sup>3</sup>	Scan Method <sup>4</sup>
480 lines	640 dots	4:3	Progressive

EDTV grade televisions and monitors are capable of displaying a maximum of 480 lines using progressive scan method. All resolutions higher than 480 lines must be reduced to 480 lines in order to be displayed. Progressive scan method reduces flicker; however, picture quality may not necessarily outperform 480 interlaced when viewed at normal viewing distances.



Vertical Res. <sup>1</sup>	Horizontal Res. <sup>2</sup>	Aspect Ratio <sup>3</sup>	Scan Method <sup>4</sup>
480 lines	640 dots	4:3	Interlaced

SDTV grade televisions and monitors are capable of displaying a maximum of 480 lines using interlaced scan method. All resolutions higher than 480 lines must be reduced to 480 lines in order to be displayed.

#### <sup>1</sup>Vertical Resolution (Scan Lines)

Vertical scan lines refer to the number of horizontal lines a TV or monitor can display to create an image. As the number of lines increase, more information is displayed, resulting in better picture quality.

#### <sup>2</sup>Horizontal Resolution

Each horizontal line in a TV or monitor is made up of individual dots (pixels). The higher the number of pixels, the finer the TV picture becomes. Horizontal pixel measurements using today's technology can range from 250 for a VCR to as much as 500 for a DVD player.

#### <sup>3</sup>Aspect Ratio

Aspect ratio identifies the ratio of the TV screen's width over its height. A 16:9 aspect ratio refers to a wide-screen picture format, while a 4:3 refers to a standard square TV format.

#### <sup>4</sup>Scan Mode

Interlaced scanning is a method that creates a TV picture with alternating lines of information and is the cause for flickering. Progressive scanning is a method that creates a TV picture with consecutive lines of information that results in flicker-free picture quality.



### **How is a HDTV/EDTV/SDTV Different from a HDTV/EDTV/SDTV Monitor?**

In order to receive digital broadcasts, a digital receiver or decoder must be used to receive and decode digital broadcast signals. Digital decoders can be built into the display itself or they may come in the form of a set-top box that is added separately to the display. HDTV/EDTV/SDTV Monitors are digital monitors without a digital decoder built into the television whereas HDTV/EDTV/SDTV Televisions are displays with a decoder built-in. HDTV/EDTV/SDTV Monitors give you the flexibility to add a digital decoder in the future when digital broadcasts are more prevalent.

### **What is "Down-Convert"?**

Down-convert takes place when a digital broadcast signal exceeds the display capabilities of the display and the broadcast signal is reduced to match the television's limited display capabilities. For example, if a TV station broadcasts a digital program using 1080 lines (1080i format) while the display can only display 480 lines, the signal is reduced or down-converted to only 480 lines, resulting in lesser information being displayed.

### **What is "Up-Convert"?**

Up-convert takes place when a digital television's display capabilities exceed the digital broadcast signal and the broadcast signal is increased to match the TV's display capabilities. For example, if a TV station broadcasts a digital program using 480 lines and the digital television is able to display 1080 lines, the signal is increased or up-converted to match the TV.

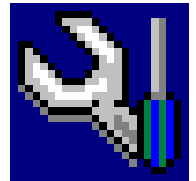
**This monitor includes advanced digital processing where all traditional analog television and video formats in the form interlaced signals are up-converted to 768 lines progressive scan method. Please note that up-conversion may result in some picture artifacts because information is being artificially added to the picture.**

### **Is This Monitor Compatible with Digital TV / HDTV?**

This monitor is compatible with digital TV. In order to receive digital television broadcasts, you will need to use a HDTV decoder or HDTV set-top box with component video output, RGB or DVI output(s). Please consult your local sales representative prior to purchasing a HDTV decoder or HDTV set-top box.

## TV Functions

# Advanced












# Advanced





## Adjusting Advanced Settings

### Using OSD Menu

Various picture adjustments can be set using the Picture Adjustment OSD menu.

- 1 Press the  on remote control or MENU key on the front panel or remote control. Use  to select ADVANCED and press   or  keys to enter ADVANCED menu.

- 2 Use   to select settings and press   keys to confirm selection.

- 3 Use   to change the setting. As you change the setting, changes in the picture are immediately reflected in the video picture. After achieving the desired setting, press  to return to previous menu or press  to exit menu.



### Explanation of Various Picture Control Settings

Explanation of each available picture control settings are listed in the table below.

#### Power Step

Use Power Step to determine whether you would like the display to power-on automatically or remain turned off after power is restored after a "power-outage" incident. Select "1-Step" if you want the TV to power-on automatically.

#### Default Aspect

Use to select the default power-on aspect ratio upon power-up. There are three setting to choose from (1) 16:9, (2) 4:3, (3) Panoramic.

#### INPUT SKIP















Use to select one input as only one skipped signal, other inputs are valid. Select NORMAL to keep all inputs available.

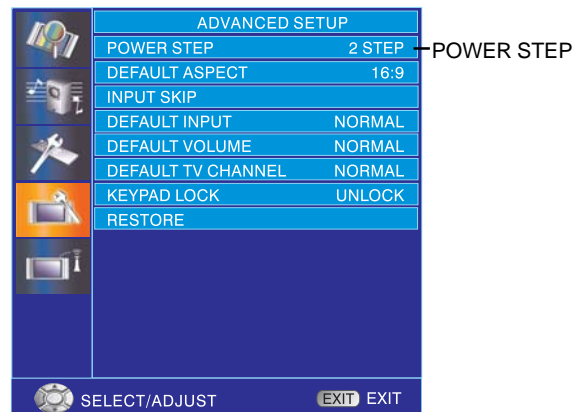
#### Note:

- DEFAULT ASPECT setting will be functional after power has been reset.
- PANOROMIC setting from DEFAULT ASPECT is selectable under ANALOG, COMPOSITE and S-VIDEO modes.

## Power STEP















To switch TV to power-on automatically or remain turned off after power is resotred after a “power-outage” incident.

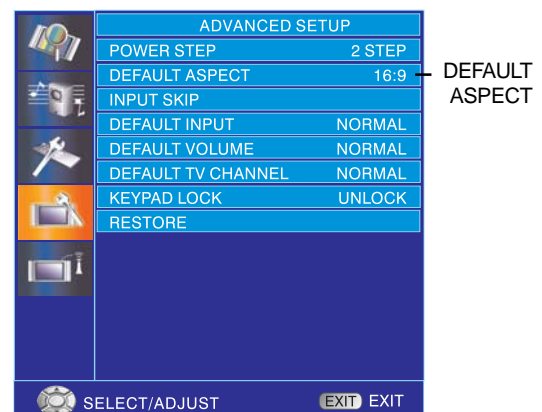
- 1 Press the  on remote control or MENU key on the front panel or remote control. Use   to select ADVANCED and press   or  keys to enter ADVANCED function.
- 2 Use   to select POWER STEP and press   key to enter POWER STEP menu.
- 3 Use   to change the setting. After achieving desired setting, press  to return to previous menu or press  to exit menu.



## Default Aspect

To select the default power-on aspect ratio.















- 1 Press the  on remote control or MENU key on the front panel or remote control. Use   to select ADVANCED and press   or  keys to enter ADVANCED function.
- 2 Use   to select DEFAULT ASPECT and press   key to enter DEFAULT ASPECT menu.
- 3 Use   to change the setting. After achieving desired setting, press  to return to previous menu or press  to exit menu.

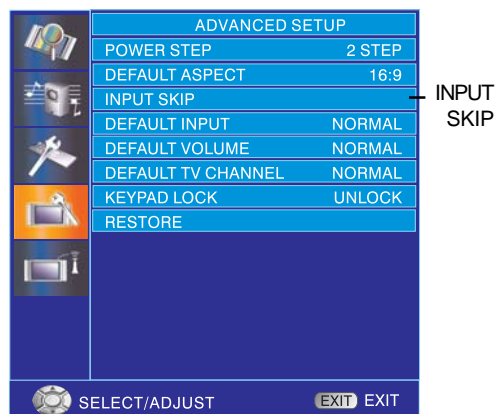


## Advanced

### Input Skip

To select one input as only one skipped signal.

- 1 Press the  on remote control or MENU key on the front panel or remote control. Use   to select ADVANCED and press   or  keys to enter ADVANCED function.
- 2 Use   to select INPUT SKIP and press   key to enter INPUT SKIP menu.
- 3 Use   to change the setting. After achieving the desired setting, press  to return to previous menu or press  to exit menu.



# Appendix



# Appendix

## Troubleshooting

The following list represents possible anomalies that you may encounter and methods for remedy. Please refer to this checklist prior to contacting a service representative.

Symptom	Possible Cause	Remedy
No picture is displayed	<ol style="list-style-type: none"> <li>1. The power cord is disconnected.</li> <li>2. The main power switch on the back of the monitor is not switched on.</li> <li>3. The selected input has no connection.</li> <li>4. The monitor is in standby mode in RGB mode.</li> </ol>	<ol style="list-style-type: none"> <li>1. Plug in the power cord.</li> <li>2. Make sure the power switch is switched on.</li> <li>3. Connect a signal connection to the monitor.</li> <li>4. Press any key on your keyboard.</li> </ol>
Interference displayed on the monitor or audible noise is heard	<ol style="list-style-type: none"> <li>1. Caused by surrounding electrical appliances, cars/motorcycles or fluorescent lights.</li> </ol>	<ol style="list-style-type: none"> <li>1. Move the monitor to another location to see if the interference is reduced.</li> </ol>
Color is abnormal	<ol style="list-style-type: none"> <li>1. The signal cable is not connected properly.</li> </ol>	<ol style="list-style-type: none"> <li>1. Make sure that the signal cable is attached firmly to the back of the monitor.</li> </ol>
Picture is distorted with abnormal patterns	<ol style="list-style-type: none"> <li>1. The signal cable is not connected properly.</li> <li>2. The input signal is beyond the capabilities of the monitor.</li> </ol>	<ol style="list-style-type: none"> <li>1. Make sure that the signal cable is attached firmly.</li> <li>2. Check the video signal source to see if it is beyond the range of the monitor. Please verify its specifications with this monitor's specification section.</li> </ol>
Display image doesn't fill up the full size of the screen	<ol style="list-style-type: none"> <li>1. If under RGB mode, the H-Size and V-Size is incorrectly set.</li> <li>2. If under TV, AV1, AV2, or Component with 480i input, the 4:3 WIDE mode is switched on.</li> </ol>	<ol style="list-style-type: none"> <li>1. Use H-Size and V-Size to adjust the size of the video.</li> <li>2. Use the WIDE key to scroll through various full screen modes.</li> </ol>
Can hear sound, but no picture	<ol style="list-style-type: none"> <li>1. Improperly connected source signal cable.</li> </ol>	<ol style="list-style-type: none"> <li>1. Make sure that both video inputs and sound inputs are correctly connected.</li> </ol>
Can see picture but no sound is heard	<ol style="list-style-type: none"> <li>1. Improperly connected source signal cable.</li> <li>2. Volume is turned all the way down.</li> <li>3. MUTE is turned on.</li> </ol>	<ol style="list-style-type: none"> <li>1. Make sure that both video inputs and sound inputs are correctly connected.</li> <li>2. Use VOLUME +/- to hear sound.</li> <li>3. Switch MUTE off by using the MUTE button.</li> </ol>
Some picture elements do not light up	<ol style="list-style-type: none"> <li>1. Some pixels of the display may not turn on.</li> </ol>	<ol style="list-style-type: none"> <li>1. This monitor is manufactured using an extremely high level of precision technology; however, sometimes some pixels of the monitor may not display. This is not a malfunction. Please see the enclosed warranty card for more information.</li> </ol>
After-Images can still be seen on the monitor after the monitor is powered off. (Examples of still pictures include logos, video games, computer images, and images displayed in 4:3 normal mode)	<ol style="list-style-type: none"> <li>1. A still picture is displayed for an over extended period of time.</li> </ol>	<ol style="list-style-type: none"> <li>1. Do not allow a still image to be displayed for an extended period of time as this can cause a permanent after-image to remain on the monitor.</li> </ol>

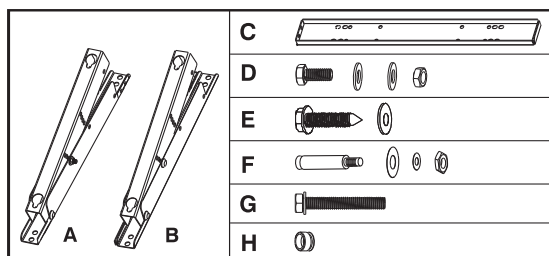


## Wall Mount Instructions

1

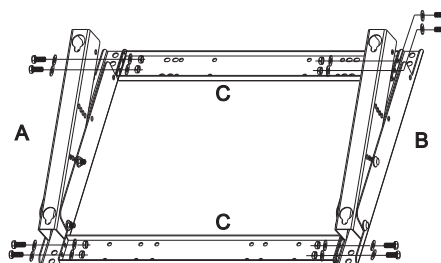
Empty contents of the package.  
Make sure the following items are present.

- A. Left Wall Angle Module
- B. Right Wall Angle Module
- C. Horizontal Support x 2
- D. Screws for Adjustment Angle x 8
- E. Screws for Wooden Wall Mounting x 8
- F. Screws for Cement Wall Mounting x 8
- G. Screw x 4
- H. Mounting Peg and Screw x 4



2

Attach Horizontal Supports to the Left and Right Wall Angle Module (A and B) with screws (D).

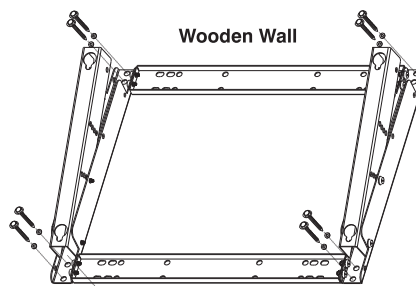
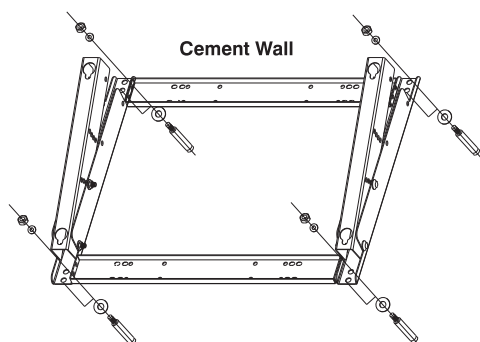


3

Install the Wall Mount Bracket onto the wall.

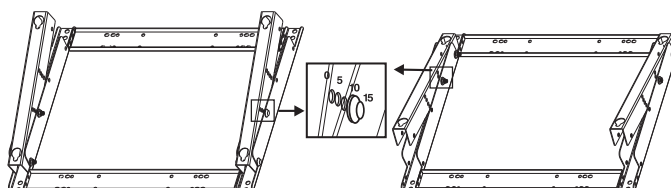
### Note:

The screws in this package are for mounting onto a wooden or a cement wall. Different kind of walls needs different type of screws. Please consult with a qualified installer to make sure your wall is capable of supporting his bracket and plasma display.



4

You can adjust the inclination angle (0, 5, 10, 15 degrees) by adjusting the screws position on the Wall Mount Module.

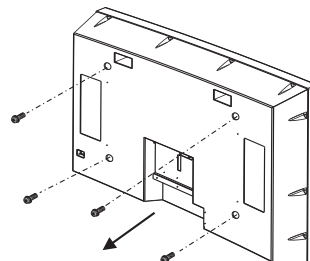


# Appendix

## Wall Mount Instructions

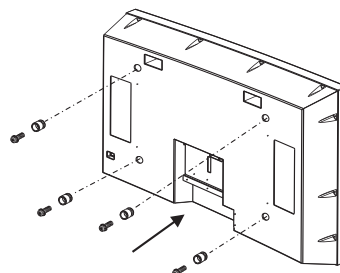
5

Remove the four mounting screws on the rear of the display.



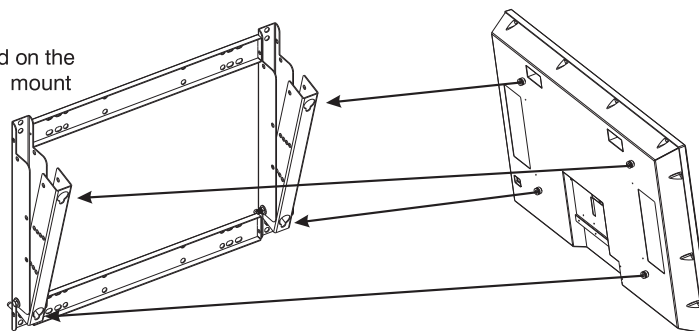
6

Screw mounting pegs (H) to the rear of the display with the screws removed in step 5.



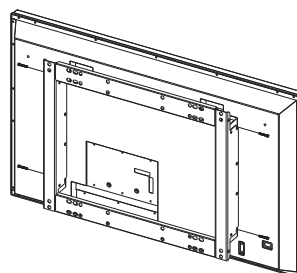
7

Remove the pedestal table-top stand on the unit, install the unit onto the wall mount bracket.



8

- Put the plasma display on Wall Mount, by matching the 4 pegs to the holes on Wall Mount.
- Use the screws(G) to secure the display to the Wall Mount by tightening the screws through the holes on the right and left sides of the Wall Mount.



### Note:

- Wall mount bracket is an optional accessory, please contact your local sales agent for more information.
- This type of equipment is to be installed by qualified installers, please contact an authorized dealer for installation.
- Please make sure that your wall is capable of supporting this wall mount and plasma display which can easily weigh over 120 kg (265 lbs.).

## Specifications for 42" TV

**Display Panel**

Screen size	42"
Aspect ratio	16:9
Number of pixels	1024 (Horizontal) x 768 (Vertical) pixels
Pixel Pitch	0.192 (Horizontal)mm x 0.693 (Vertical)mm
Luminance	1000 cd/m <sup>2</sup> , at APL13%

**Power Source**

Input voltage	100 ~ 240Vac, 50 / 60Hz
Input current	3.5A Max. (at 110Vac)
Inrush current	67A p-p/20ms Max. (at 240Vac)
Power consumption	380 Watts (at 110Vac/color bar pattern)
Stand-by	1 Watts Max. (at 110Vac)

**Connection**

Connector Types	Video Composite jack X 2 sets S-Video jack (4 pin Din S-Terminal) X 1 set Video Component RCA jack X 1 set PC (15 pin D-SUB) X 1 set HDMI (19 pin) X 2 set USB X 1 set (for service only) Audio L/R jack X 5 sets RF input X 1 set RS-232 (9 pin D-SUB) X 1 set
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**Video/S-Video Signal**

Type	Analog
Polarity	Positive
Amplitude d.	Video 1Vp-p, (priority S-Video) Y=1Vp-p C=0.286Vp-p
Frequency	H: 15.734KHz V: 60Hz (NTSC) H: 15.625KHz V: 60Hz (PAL)
Input impedance	75 ohms

**Y/CB/CR or Y/PB/PR Signal (Component 1 & 2)**

Type	Analog
Polarity	Positive
Amplitude	AV: 1Vp-p (with sync)/750 ohms S-Video: Y: 1Vp-p, C: 0.286Vp-p
Frequency	
Y/CB/CR	H: 15.734KHz V: 60Hz (NTSC)
Y/PB/PR: HDTV	H: 31KHz V: 60Hz (480p) H: 45KHz V: 60Hz (720p) H: 33KHz V: 60Hz (1080i)

**PC Signal**

Type	TTL
Polarity	Positive or Negative
Amplitude	PC: 0.7Vp-p
Frequency	H: support to 31K ~ 64KHz V: support to 50 ~ 7KHz

# Appendix

## Specifications for 42" (con't)

### HDMI Signal

Type	Digital
Polarity	Positive or Negative
Frequency	H: support to 31K ~ 64KHz V: support to 50 ~ 70Hz

### Audio Signal

Audio: 1.0Vp-p

### Pin Assignments For D-SUB connector (in / loop out)

Pin	Signal Assignment	Pin	Signal Assignment	Pin	Signal Assignment	Pin	Signal Assignment	Pin	Signal Assignment
1	RED	4	N.C.	7	GREEN Return	10	GND	13	H-SYNC
2	GREEN	5	GND	8	BLUE Return	11	N.C.	14	V-SYNC
3	BLUE	6	RED Return	9	5V Supply	12	DDC Data	15	DDC Clock

### Pin Assignments For 19 Pin HDMI connector (digital only)

Pin	Signal Assignment	Pin	Signal Assignment	Pin	Signal Assignment
1	HDMI_RX2+	9	HDMI_RX0-	17	Ground (For +5V)
2	Ground (For +5V)	10	HDMI_RXC+	18	IN_5V
3	HDMI_RX2-	11	Ground (For +5V)	19	RX_HOTPLUG
4	HDMI_RX1+	12	HDMI_RXC-		
5	Ground (For +5V)	13	No Connect		
6	HDMI_RX1-	14	No Connect		
7	HDMI_RX0+	15	RX5V DDC SCL		
8	Ground (For +5V)	16	RX5V DDC SDA		

### Y/PB/PR For Component 1

Mode	Resolution	Refresh Rate
1	720 x 480i	60
2	720 x 480p	60
3	1280 x 720p	60
4	1920 x 1080i	60

**Maximum Resolution** Up to 1024 x 768

### Dimensions & Weight

	With/Stand	Without/Stand
Width	1072.4 mm/100 1/2"	1072.4 mm/100 1/2"
Height	788.8 mm/31"	748.8 mm/29 1/2"
Depth	260 mm/10 1/4"	94.5 mm/3 3/4"
Weight	37.5 kgs/82.7 lbs	39.5 kgs/87.1 lbs

### Operating

Temperature	0 ~ 40°C (32 ~ 104°F)
Relative humidity	20 ~ 85%
Altitude	10,000 feet

### Non-Operating

Temperature	-10 ~ 60°C (14 ~ 140°F)
Relative humidity	10 ~ 85%
Altitude	10,000 feet

## Specifications for 50" TV

**Display Panel**

Screen size	50"
Aspect ratio	16:9
Number of pixels	1366 (Horizontal) x 768 (Vertical) pixels
Pixel Pitch	0.81 (Horizontal)mm x 0.81 (Vertical)mm
Luminance	1000 cd/m <sup>2</sup> , at APL13%

**Power Source**

Input voltage	100 ~ 240Vac, 50 / 60Hz
Input current	5A Max. (at 110Vac)
Inrush current	67A p-p/20ms Max. (at 240Vac)
Power consumption	500 Watts (at 110Vac/color bar pattern)
Stand-by	1 Watts Max. (at 110Vac)

**Connection**

Connector Types	Video Composite jack X 2 sets S-Video jack (4 pin Din S-Terminal) X 1 set Video Component RCA jack X 1 set RGB (15 pin D-SUB) X 1 set HDMI (19 pin) X 2 set USB X 1 set (for service only) Audio L/R jack X 5 sets RF input X 1 set RS-232 (9 pin D-SUB) X 1 set
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**Video/S-Video Signal**

Type	Analog
Polarity	Positive
Amplitude d.	Video 1Vp-p, (priority S-Video) Y=1Vp-p C=0.286Vp-p
Frequency	H: 15.734KHz V: 60Hz (NTSC) H: 15.625KHz V: 60Hz (PAL)
Input impedance	75 ohms

**Y/Cb/Cr or Y/Pb/Pr Signal (Component 1 & 2)**

Type	Analog
Polarity	Positive
Amplitude	AV: 1Vp-p (with sync)/750 ohms S-Video: Y: 1Vp-p, C: 0.286Vp-p
Frequency	
Y/Cb/Cr	H: 15.734KHz V: 60Hz (NTSC)
Y/Pb/Pr: HDTV	H: 31KHz V: 60Hz (480p) H: 45KHz V: 60Hz (720p) H: 33KHz V: 60Hz (1080i)

**PC Signal**

Type	TTL
Polarity	Positive or Negative
Amplitude	PC: 0.7Vp-p
Frequency	H: support to 31K ~ 64KHz V: support to 50 ~ 7KHz

# Appendix

## Specifications for 50" TV(con't)

### HDMI Signal

Type	Digital
Polarity	Positive or Negative
Frequency	H: support to 31K ~ 64KHz V: support to 50 ~ 70Hz

### Audio Signal

Audio: 1.0Vp-p

### Pin Assignments For D-SUB connector (in / loop out)

Pin	Signal Assignment	Pin	Signal Assignment	Pin	Signal Assignment	Pin	Signal Assignment	Pin	Signal Assignment
1	RED	4	N.C.	7	GREEN Return	10	GND	13	H-SYNC
2	GREEN	5	GND	8	BLUE Return	11	N.C.	14	V-SYNC
3	BLUE	6	RED Return	9	5V Supply	12	DDC Data	15	DDC Clock

### Pin Assignments For 19 Pin HDMI connector (digital only)

Pin	Signal Assignment	Pin	Signal Assignment	Pin	Signal Assignment
1	HDMI_RX2+	9	HDMI_RX0-	17	Ground (For +5V)
2	Ground (For +5V)	10	HDMI_RXC+	18	IN_5V
3	HDMI_RX2-	11	Ground (For +5V)	19	RX_HOTPLUG
4	HDMI_RX1+-	12	HDMI_RXC-		
5	Ground (For +5V)	13	No Connect		
6	HDMI_RX1-	14	No Connect		
7	HDMI_RX0+	15	RX5V DDC SCL		
8	Ground (For +5V)	16	RX5V DDC SDA		

### Y/PB/PR For Component 1

Mode	Resolution	Refresh Rate
1	720 x 480i	60
2	720 x 480p	60
3	1280 x 720p	60
4	1920 x 1080i	60

**Maximum Resolution** Up to 1360 x 768

### Dimensions & Weight

	With/Stand	Without/Stand
Width	1257 mm/49 1/2"	1257 mm/49 1/2"
Height	889 mm/35"	856 mm/33 3/4"
Depth	260 mm/10 1/4"	110 mm/4 1/3"
Weight	49.9 kgs/110 lbs	48.1 kgs/106 lbs

### Operating

Temperature	5 ~ 40°C
Relative humidity	20 ~ 70%
Altitude	307~1013 hpa






### Non-Operating

Temperature	-20 ~ 70°C
Relative humidity	5 ~ 85%
Altitude	307~1013 hpa

## How to Program the Universal Remote Control

You can program the remote control with three different components. Please follow below instruction to program your VCR, Cable Box/Set-Top Box or DVD Player.

### Four Easy Steps for Programming

- 1 Press the  ,  or  button on the remote control.
- 2 Press and hold the  button until the LED LIGHT flashes twice.
- 3 Finding the brand of your VCR, Cable Box/Set-Top Box or DVD Player in the component code list and enter the 5 digital code numbers by using number buttons. If the code is accepted, the LED will flash after the last digit entered. If the LED does not flash twice, please repeat above steps 1 and 2 until LED flash twice.
- 4 Point the remote control at the VCR, Cable Box/Set-Top Box or DVD Player then presses the  button.  
The component should be turn on by remote control.

#### Note:

- If your VCR, Cable Box/Set-Top Box or DVD Player does not respond, try other codes for your brand.
- Sometimes a code listed will only include limited functions. Try other codes that may include more functionalities.

# Appendix

## Component Program Code

Setup Code For VCRs	
ABS	21972
Admiral	20048, 20209
Aiko	20278
Aiwa	20037, 20479
Alienware	21972
America Action	20278
American High	20035
Amoisonic	20479
Anam	20162, 20037, 20240, 20278
Anam National	20162
Asha	20240
Audiovox	20037, 20278
Beaumark	20240
Bell & Howell	20104
Broksonic	20184, 20121, 20209, 20002, 20479
Calix	20037
Canon	20035
Carver	20081
CCE	20072, 20278
Changhong	20048, 20081
Citizen	20037, 20278
Colt	20072
Craig	20037, 20047, 20240, 20072
Curtis Mathes	20060, 20035, 20162
Cybernex	20240
CyberPower	21972
Daewoo	20045, 20104, 20278
Dell	21972
Denon	20042
DirectTV	20739
Durabrand	20039, 20038
Electrohome	20037
Electroponic	20037
Emerex	20032
Emerson	20035, 20037, 20184, 20240, 20045, 20121, 20043, 20209, 20002, 20278, 20479
Fisher	20047, 20104
Fuji	20035, 20033
Fujitsu	20045
Gateway	21972
GE	20060, 20035, 20240
General	20045
Go Video	20432
GoldStar	20037, 20209, 20038, 20225
Haojie	20240
Harman/Kardon	20081, 20038
Harwood	20072
Hewlett Packard	21972
HI-Q	20047
Hitachi	20037, 20042, 20055
Howard Computers	21972
HP	21972
Hughes Network Systems	20042, 20739
iBUYPOWER	21972
JVC	20045, 20067
KEC	20037, 20278
Kenwood	20067, 20038
KLH	20072

Setup Code For VCRs	
Kodak	20035, 20037
Kolin	20043
LG	20037, 20045, 20042, 20209, 20038
Logik	20072
LXI	20037
Magnavox	20035, 20039, 20081
Magnin	20240
Marantz	20035, 20081
Marta	20037
Matsushita	20035, 20162
Media Center PC	21972
MEI	20035
Memorex	20035, 20162, 20037, 20048, 20039, 20047, 20240, 20104, 20479
MGA	20240, 20043
MGN Technology	20240
Microsoft	21972
Mind	21972
Minolta	20042
Mitsubishi	20067, 20043
Motorola	20035, 20048
MTC	20240
Multitech	20072
NEC	20035, 20037, 20048, 20104, 20067, 20038
Newave	20037
Nikko	20037
Noblex	20240
Northgate	21972
Olympus	20035
Optimus	21062, 20162, 20037, 20048, 20104, 20432
Orion	20184, 20209, 20002, 20479
Panasonic	21062, 20035, 20162, 20616, 20225
Penney	20035, 20037, 20240, 20042, 20038
Pentax	20042
Philco	20035, 20479
Philips	20035, 20081, 20739, 20618
Pilot	20037
Pioneer	20042, 20067
Polk Audio	20081
Profitronic	20240
Proscan	20060
Protec	20072
Pulsar	20039
Qisheng	20060
Quasar	20035, 20162
Radix	20037
Randex	20037
RCA	20060, 20035, 20240, 20042, 20880
Realistic	20035, 20037, 20048, 20047, 20104
ReplayTV	20616
Runco	20039
Sampo	20037, 20048
Samsung	20240, 20045, 20432



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Setup Code For VCRs	
Sanky	20048, 20039
Sansui	20067, 20209, 20479
Sanyo	20047, 20240, 20104
Scott	20184, 20045, 20121, 20043
Sears	20035, 20037, 20047, 20042, 20104
Sharp	20048, 20209
Shintom	20072
Shogun	20240
Singer	20072
Sonic Blue	20616
Sony	20035, 20032, 20033, 20636, 21972
STS	20042
Sylvania	20035, 20081, 20043
Systemax	21972
Tagar Systems	21972
Tashiko	20037
Tatung	20045, 20067
Technics	20035, 20162
Teco	20035, 20037, 20048, 20038
Teknika	20035, 20037
Tivo	20636, 20618, 21503, 20739
TMK	20240
Toshiba	20045, 20042, 20067, 20043, 21503, 21008, 21972
Totevision	20037, 20240
Touch	21972
Unitech	20240
Vector	20045
Vector Research	20038
Victor	20067
Video Concepts	20045
Videomagic	20037
Videosonic	20240
Viewsonic	21972
Wards	20060, 20035, 20048, 20047, 20081, 20240, 20042, 20072
White Westinghouse	20209, 20072
XR-1000	20035, 20072
Yamaha	20038
Zenith	20039, 20033, 20209, 20479
ZT Group	21972

Setup Code For DVD Players	
Aiwa	20641, 21912
Akai	20770
Allegro	20869
Apex Digital	20672, 20717, 20797, 21061, 20796, 21056, 21937, 20794, 21020, 21915
Blaupunkt	20717
Blue Parade	20571
Broksonic	20695
Changhong	20627, 21061
CineVision	20869
Coby	21086
Curtis Mathes	21087
CyberHome	21024, 21023, 21129, 20816, 21117
Daewoo	20833, 21172, 20869
Denon	20490
DVD2000	20521
Emerson	20591, 20675
Enterprise	20591
Fisher	21919
Funai	20675
Gateway	21158, 21073
GE	20522, 20717
Go Video	20744, 20833, 21099, 20783, 21075, 20869, 21730
Greenhill	20717
Harman/Kardon	20582, 20702
Hitachi	20573, 20664, 21919
Hiteker	20672
Initial	20717
Integra	20627, 21924
JBL	20702
JVC	20558, 20623, 20867
Kenwood	20490, 20534
KLH	20717, 21020, 21149
Koss	20651, 21980
Lasonic	20798
LG	20591, 20869, 20801
Liquid Video	21980
Lite-On	21158, 21058
Loewe	20511
Magnavox	20503, 20539, 21976, 21914, 20675
Marantz	20539
Maxent	20752, 20698
Memorex	20695
Microsoft	20522
Mintek	20717
Mitsubishi	21521, 20521
Nesa	20717
Norcent	21003
Onkyo	20503, 20627, 21924, 20792
Oritron	20651, 21980
Panasonic	20490, 21762, 21990
Philips	20503, 20539, 20646, 21914
Pioneer	20525, 20571
Polaroid	21086, 21061
Polk Audio	20539

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Setup Code For DVD Players	
Portland	20770
Proscan	20522
Qwestar	20651
RCA	20522, 20571, 20717, 20822
Rio	20869
Rotel	20623
Sampo	20752, 20698
Samsung	20490, 20573, 21932, 21075, 20820
Sansui	20695
Sanyo	20695
Sharp	20630, 20752
Sharper Image	21117
Sherwood	20770
Shinco	20717
Shinsonic	20533
Sonic Blue	20869, 21099
Sony	20533, 20864, 21033, 21904, 21903
SVA	20717
Sylvania	20675
Symphonic	20675
Teac	20717, 21984, 20809
Technics	20490
Theta Digital	20571
Toshiba	20503, 20695
Urban Concepts	20503
Xbox	20522
Yamaha	20490, 20539, 20545
Zenith	20503, 20591, 20869

Setup Code For Cable Converters	
ABC	00003, 00008, 00014
Americast	00899
Bell & Howell	00014
Bell South	00899
Clearmaster	00883
ClearMax	00883
Daeryung	01877, 00877, 00477, 00008
Digi	00637
Director	00476
Dumont	00637
Gehua	00476
General Instrument	00476, 00810, 00276, 00003, 00014
GoldStar	00144
Hamlin	00009, 00273
Hitachi	00014
Jerrold	00476, 00810, 00276, 00003, 00012, 00014
KNC	00008
LG	00144
Memorex	00000
Motorola	00476, 00810, 00276, 01254, 01376
MultiVision	00012
Pace	01877, 00237
Panasonic	00000, 00008, 00107
Panther	00637
Paragon	00000
Philips	00317, 01305
Pioneer	01877, 00877, 00144, 00533
Pulsar	00000
Quasar	00000
RadioShack	00883
Regal	00279, 00273
Runco	00000
Samsung	00000, 00144
Scientific Atlanta	01877, 00877, 00477, 00008
Sony	01006
Starcom	00003, 00014
Supercable	00276
Supermax	00883
Tocom	00012
Torx	00003
Toshiba	00000
Trans PX	00276
Tristar	00883
TS	00003
V2	00883
Viewmaster	00883
Vision	00883
Vortex View	00883
Zenith	00000, 00525, 00899

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Setup Code For Satellite Receivers	
AlphaStar	00772
Chaparral	00216
Crossdigital	01109
DirecTV	00392, 00566, 00639, 01142, 00247, 00749, 01749, 00724, 00819, 01856, 01076, 01109, 00099, 01392, 01640, 01442, 01414, 01108
Dish Network System	01005, 00775, 01505
Dishpro	01005, 00775, 01505
Echostar	01005, 00775, 01505
Expressvu	00775
GE	00566
General Instrument	00869
GOI	00775
Goodmans	01246
Hisense	01535
Hitachi	00819, 00222, 01250
HTS	00775
Hughes Network Systems	01142, 00749, 01749, 01442
I-Lo	01535
JVC	00775
LG	01414, 01226
Magnavox	00724, 00722
Memorex	00724
Mitsubishi	00749
Motorola	00869
NEC	01270
Next Level	00869
Panasonic	00247, 00701
Paysat	00724
Philips	01142, 00749, 01749, 00724, 01076, 00722, 00099, 01442
Proscan	00392, 00566
Proton	01535
RadioShack	00869
RCA	00392, 00566, 00855, 00143, 01392
Samsung	01276, 01109, 01108
Sanyo	01219
SKY	00856
Sony	00639, 01640
Star Choice	00869
Tivo	01142, 01442
Toshiba	00749, 01749, 00790, 01285
UltimateTV	01640, 01392
Uniden	00724, 00722
US Digital	01535
USDTV	01535
Voom	00869
Zenith	00856, 01856

Setup Code For Audio Amplifiers	
Bose	30674
GE	30078
JVC	30331
Marantz	30321
Nakamichi	30321
NEC	30264
Optimus	30395
Realistic	30395
Sansui	30321
Shure	30264
Sony	30689
Soundesign	30078
Victor	30331
Wards	30078
Yamaha	30354, 30133

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Setup Code For CD Players	
Aiwa	30157
Burmester	30420
California Audio Labs	30029
Carver	30157, 30179
Denon	30873
DKK	30000
DMX Electronics	30157
Dynamic Bass	30179
Fisher	30179
Garrard	30420
Genexxa	30032
Harman/Kardon	30157, 30173
Hitachi	30032
Integra	30101
JVC	30072
Kenwood	30826, 30626, 30028, 30037, 30036, 30190
Krell	30157
Linn	30157
Magnavox	30157
Marantz	30626, 30029, 30157
MCS	30029
Miro	30000
Mission	30157
MTC	30420
NSM	30157
Onkyo	30868, 30101
Optimus	31063, 30000, 30032, 30037, 30420, 30179, 31075, 30145
Panasonic	30029
Parasound	30420
Philips	30626, 30157
Pioneer	31063, 31062, 30032
Polk Audio	30157
Proton	30157
QED	30157
Quad	30157
Quasar	30029
RadioShack	31075
RCA	31062, 30032, 30420, 30179, 30053
Realistic	30420, 30179
Rotel	30157, 30420
SAE	30157
Sansui	30157
Sanyo	30179
SAST	30157
Sharp	30861, 30037
Silsonic	30888, 30036
Sonic Frontiers	30157
Sony	30490, 30000, 30100
Soundesign	30145
TAG McLaren	30157
Tascam	30420
Teac	30420
Technics	30029
Victor	30072
Wards	30157, 30053
Yamaha	30888, 30036
Zonda	30157

Setup Code For Audio Amp/Tuners	
ADC	30531
Aiwa	31405, 31243, 30121
Anam	31609, 31074
Audiotronic	31189
Capetronic	30531
Carver	31189
Coby	31263
Denon	31360, 31142, 30904
Fonmix	31360
Glory Horse	31263
Harman/Kardon	30110
Hitachi	31273
Inkel	30027
Integra	30135
JBL	30110
JVC	30074, 31263
Kenwood	31313, 31570, 30027
KLH	31428
Magnavox	31189, 31269, 30531
Marantz	31189, 31269, 30039
MCS	30039
Onkyo	30842, 30135
Optimus	31023, 30670, 30531, 31074
Panasonic	31518, 30039
Philips	31189, 31269
Pioneer	31023, 30150, 30014, 30630, 30531
Proscan	31254
Qisheng	31609
Quasar	30039
RadioShack	31263
RCA	31023, 31609, 31254, 30531, 31074
Sharper Image	31263
Silsonic	30176
Sony	31058, 31441, 31258, 31759
Soundesign	30670
Stereophonics	31023
Sunfire	31313
Teac	31074, 31267
Technics	31308, 31518, 30039
Thorens	31189
Victor	30074
Wards	30014
Yamaha	30176, 31276, 31176

